

A mixed methods study examining the role of professional YouTubers in young people's health behaviours in the UK: implications for health interventions

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Abstract

YouTubers are popular among young people and produce plentiful health content. Research suggests YouTube health content varies in quality and social media health interventions remain scarce. However, popular media and public health organisations are increasingly recognising YouTubers' potential influence as a source of health information for young people. Little research has considered the nature of YouTuber content, young people's engagement or YouTubers' motives for producing it. This programme of research sought to examine the role professional YouTubers play in young people's health behaviours in the UK. The research adopted a four-stage mixed methods sequential design. A questionnaire with 13-18 year olds (n=931) provided a sampling frame for three qualitative studies. These were a netnographic analysis of health-related videos (n=133) from 7 UK YouTubers, 8 focus groups with 13-18 year olds (n=85) and semi-structured interviews with UK YouTubers (n=3). Participating young people were from one county in North West England. The findings confirm YouTubers are a recognised source of health information for young people. YouTubers produce content on a range of topics with numerous perceived benefits. A successful trait is YouTubers' ability to foster a sense of community; this familiarity and trust allows them to endorse health-related products or behaviours. YouTubers were thus viewed as role models by young viewers. Several complexities of YouTuber health content production were also highlighted. Young people and YouTubers were concerned giving advice beyond their expertise could lead to misdiagnosis, triggering or worsening of health conditions. There was an inherent tension between self-promotion and health promotion with YouTubers reluctant to expose themselves to criticism, compromise their brand and authenticity or engage in self-regulatory practices. The distinction between commercial, NHS or charity sponsored, and unsponsored content and sponsor intentions (health promotion or commercial) were not always clear. The impact of YouTuber health content is therefore dependent on young people's critical literacy skills, which increased with age. Overall, the research confirms YouTubers' considerable potential to contribute to young people's health improvement interventions, but successful interventions must consider factors that affect young people's engagement and YouTubers' production of health content.

Presentations

Harris J “Like, Comment and Subscribe!” Examining the Role Professional YouTubers play in Young People’s Health Behaviours and Identities in the UK (oral). Association of Internet Researchers Conference 2018, Montreal, October 2018

Harris J, Germain J, Maxwell C & Mckay S. Online Research Methods: The World at Our Fingertips? (workshop) Improving and Understanding Health PhD Conference, LJMU, July 2018

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Papers under review

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Abbreviations

ad	Advertisement
AoIR	Association of Internet Researchers
API	Application Programming Interface
APPG	All Party Parliamentary Group
ASA	Advertising Standards Agency
BMI	Body Mass Index
BPS	British Psychological Society
btw	by the way
CAP	Committees of Advertising Practice
CBT	cognitive behavioural therapy
DMI	Digital Methods Initiative
Fandom	fans of a particular person, team, fictional series, etc. regarded collectively as a community or subculture
GP	General Practitioner
IDACI	Income Deprivation Affecting Children Index
idk	I don't know
LGBT	Lesbian, Gay, Bisexual and Transgender
LJMU	Liverpool John Moores University
NHS	National Health Service
NSPCC	National Society for the Prevention of Cruelty to Children
OfCom	The Office of Communications
ONS	Office for National Statistics
OR	Odds Ratio
P	Participant (code)
PHE	Public Health England
PHSE	Personal, Health, Social and Economic Education
Q&A	Question and Answer
R	Researcher (code)
RCT	Randomised Control Trial
REC	Research Ethics Committee
SPSS	Statistical Package for the Social Sciences
STD	Sexually Transmitted Disease

U	you
UK	United Kingdom
UN	United Nations
uno	you know?
ur	your
US	United States
VIF	Variance Inflation Factor
vlog	Video Blog
vlogger	Video Blogger
VR	Virtual Reality
WEMWBS	Warwick Edinburgh Mental Wellbeing Scale
WHO	World Health Organisation
YMCA	Young Men's Christian Association
YouTuber	Someone who produces and appears in videos on the site YouTube
YT	YouTuber (participant code)

Chapter 1: Introduction

On New Year's Eve 2016, American YouTuber Logan Paul uploaded a video to his YouTube channel of a visit to Aokigahara Forest in Japan¹. The 21-year-old had moved over to YouTube as a daily vlogger from the now extinct social media platform Vine and at the time had 16.5 million YouTube subscribers. Aokigahara Forest is known as a prevalent suicide site and while filming Logan encountered a suicide victim and chose to include close ups of the victim (with the face blurred) in his vlog. He received immediate criticism for the video on social media which rapidly caught the attention of the international press. Logan removed the video 24 hours after he had originally uploaded it – by that point it had already been viewed over 6.3 million times. This particular incident is not the first, and certainly will not be the last time, that YouTubers have attracted negative attention in the international press, but it has been chosen as an opening example because it began interesting conversations in the UK media about how YouTuber content is regulated for young audiences.

The UK research company Childwise, in their annual report (Childwise 2018) published following this incident, reported that Logan Paul was the most popular YouTuber among their 2000 surveyed participants (age 5-16 years). This was his first appearance in the rankings, knocking famous UK YouTuber Zoella from the top position for the first time. Whether this, as the authors claim, reflects children searching for more edgy content or if he has simply become more recognizable due to the extensive media coverage is not clear. While Logan Paul did incur some sanctions from YouTube for this video (including a temporary suspension of advertising revenue)², he remains active on the platform. However, the debate about the negative consequences of this kind of social media content for young people continues. Most recently, Ian Russell, father of 14-year-old Molly who tragically took her own life in 2017, has spearheaded a campaign in the UK for the regulation of suicide related content on Instagram, which he believes was partially responsible for his daughter's death³. These incidents raise

¹ BBC News; Logan Paul: YouTube body video draws furious reaction 2/01/2018
<https://www.bbc.co.uk/news/world-us-canada-42539715>

² BBC News. Logan Paul's 'suicide video' punishment 'must fit the crime' 19/01/2018
<https://www.bbc.co.uk/news/newsbeat-42752039>

³ BBC News Facebook 'sorry' for distressing suicide posts on Instagram <https://www.bbc.co.uk/news/uk-46976753>

important questions about where the responsibility lies for regulating the content young people can watch on YouTube. Is it the responsibility of YouTube, government and media regulators, the YouTubers producing this content, or young people and their parents and, perhaps more importantly, what impact does this kind of content have on young people's health and wellbeing?

The answer to this question remains largely unknown. National survey data highlights the popularity of YouTube among young people with 89% of responding 12-15-year olds (Ofcom 2019a) and 98% of 16-24-year olds (Office for National Statistics 2019) watching YouTube. Additionally, any health-related term entered into the YouTube search bar will bring up thousands of examples of YouTuber produced health content. However, little research evidence has been published which systematically examines YouTuber health content in relation to young people specifically or the general population. In particular, there is no research examining the extent to which young people engage with this content, the breadth and key characteristics of YouTuber produced content, young people's perceptions of this content or YouTubers motives for producing it.

This research aimed to explore this issue by examining the role that professional YouTubers play in young people's (13-18 years) health behaviours in the UK. The knowledge generated by the research will contribute to the literature on the potential use of social media in young people's health improvement and so ultimately improve practice and policy. This chapter will provide background on young people's engagement with health content produced by UK YouTubers followed by the research purpose and specific objectives. The rationale, research approach, position of the researcher and contribution to the wider research are discussed. The chapter concludes with an overview of the thesis chapters.

1.1 Background and Rationale

The majority of young people in the UK use social media. National survey data reports 93% of 16-24 year olds have used social media in the past 12 months (Office for National Statistics 2019) and 69% of 12-15 year olds have a social media profile (Ofcom 2019a). From a public

health perspective, social media provides an additional, contemporary arena in which young people interact with risks and opportunities (Buckingham 2008) and seek health information (Gray *et al.* 2005a; Fergie *et al.* 2013). Whilst much of the existing research focuses on the risks to health and wellbeing posed by social media, social media health content can also provide several benefits including convenience, anonymity, personal expression, facilitating peer support and connection to communities with similar health concerns (Best *et al.* 2014). However, there remain concerns about young people's ability to critically appraise the quality of the health content they encounter on social media (Bartlett and Miller 2011). Evidence suggests young people's engagement is complex and balances concerns about credibility, quality, personal relevance and salience with a desire to manage their self-presentation online (Newman *et al.* 2011; Fergie *et al.* 2013). The existing evidence suggests young people's critical appraisal of social media content is more complex than their appraisal of factual sources and includes social media metrics, other users' interaction, users' quality control of the sources, and is linked to young people's social development (Livingstone 2014). Despite these complexities, social media is widely viewed as a promising setting for young people's health improvement interventions (Neiger *et al.* 2012; Moorhead *et al.* 2013). While such interventions suggest promising outcomes in knowledge, attitudes, subjective norms and health behaviours, any conclusions are limited by the poor quality of existing studies.

YouTube is a highly popular social media platform among young people. According to UK survey data, 93% of 16-24 year olds (Office for National Statistics 2019) and 89% of 12-15 year olds (Ofcom 2019a) use YouTube. Recent commentators claim the importance of YouTube as a site of informal learning for young people cannot be overstated (Miller *et al.* 2016). While recent UK survey data reports 42% of 12-15 year olds saying they would turn to YouTube for accurate and true online information about creative activities (such as: how to build, make or create things) (Ofcom 2019b). A defining characteristic of YouTube is as an intermediary participatory culture where producers and consumers, professionals and amateurs are negotiating and co-constructing their relationships (Burgess and Green 2018). YouTube's growing popularity among young audiences has led to the rise of the YouTube celebrity (Gamson 2011; Marwick 2015b) or "YouTuber" who upload both topic-based videos and video blogs (vlogs) of their daily lives to a large audience. In the UK, there are

approximately 200 YouTubers with more than one million subscribers each (Social Blade 2019). Anecdotal evidence and UK press coverage suggests these YouTubers provide commentary on health issues and share their own health behaviours with a large audience⁴ of predominantly teenagers and young adults (Sheffield 2014; Burgess and Green 2018). It has been proposed that YouTubers could therefore be a particularly relatable source of health information for young people (Beer 2008; Uhls and Greenfield 2012) and this is illustrated by Public Health England's decision to use YouTubers in "Rise Above", its most recent PHSE campaign (Public Health England 2017). Broader content analysis studies of existing health content on YouTube suggest the quality of this information is variable and often dominated by commercial sources, however there is no evidence which has specifically focused on the health information produced by YouTubers.

This research has thus evolved from a significant gap in the literature. There are currently no research studies that explore YouTuber health content in relation to young people's health behaviours. No quantitative studies have attempted to measure the level of engagement among young people with YouTubers and their health content. Furthermore, despite anecdotal evidence, no studies have attempted to systematically examine the type of health content being produced by popular YouTubers. Finally, there is a lack of qualitative evidence which explores this issue from young people's and YouTubers' perspectives. This lack of research means there is currently little understanding of how YouTuber produced health content influences young people's health behaviours or how YouTubers perceive themselves in relation to health promotion. These insights are valuable because campaigns such as Rise Above (Public Health England 2017) suggest public health organisations are beginning to make use of YouTubers in health promotion and these activities should be informed by the perspectives of young people and YouTubers. In addition, wider research suggests there is a growing interest in using social media in young people's health promotion interventions. However, as Michie et al (2011) argue, developing a thorough understanding of the

⁴ For example: Joe Sugg, Caspar Lee and Jack Maynard open up about mental health and body image in honest video with Mikey Pearce. Metro, 21/09/2019 <https://metro.co.uk/2019/01/21/joe-sugg-caspar-lee-and-jack-maynard-open-up-about-mental-health-and-body-image-in-honest-video-with-mikey-pearce-8371380/>
YouTube stars 'might encourage kids to eat more calories' BBC News 26/05/2018 <https://www.bbc.co.uk/news/health-44258509>
YouTube star Mark Ferris opens up about struggling with an eating disorder: 'I was in a weird space with my body' Metro 20/11/2018 <https://metro.co.uk/2018/11/20/youtube-star-mark-ferris-opens-up-about-struggling-with-an-eating-disorder-i-was-in-a-weird-space-with-my-body-8160952/>

circumstances in which health improvement efforts are most likely to be effective is an important initial step in intervention design and in the case of YouTubers, the evidence to support this is currently lacking.

1.2: Aim of the research and research objectives

The aim of this mixed methods study was to examine the role that professional YouTubers play in influencing the health behaviours of young people in the UK. The research sought to understand if young people are engaging with the content produced by these YouTubers, what type of health information they are watching in this context and how both young people and YouTubers perceive this health content. In order to address the research aim, the following objectives were developed:

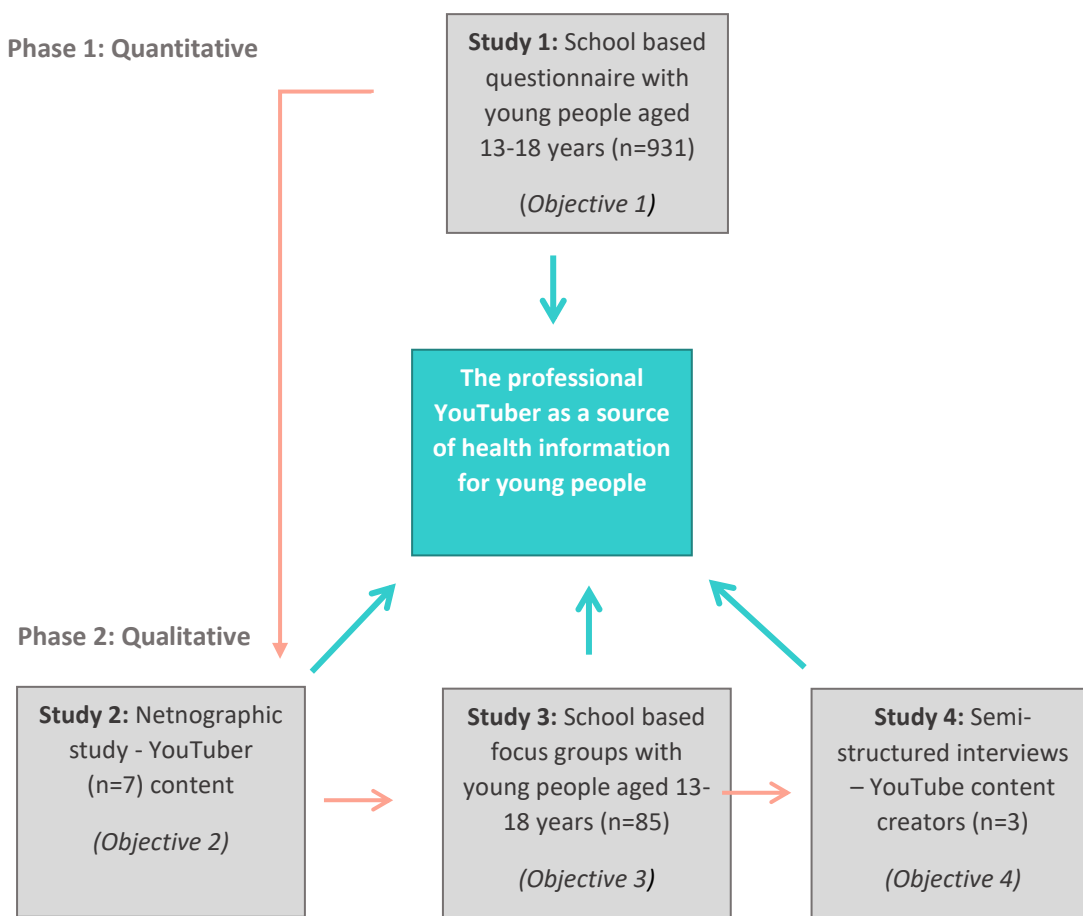
1. To quantify both young people's engagement with professional YouTubers and the role this plays in sourcing health related information.
2. To examine the ways in which health information is communicated by professional YouTubers.
3. To explore the way in which these health messages influence young people's health behaviours (taking into account differences in age, gender and class).
4. To explore the role that professional YouTubers themselves believe they play in the communication of health messages.
5. To consider the potential contribution YouTube can make to the development of health improvement interventions for young people.

1.3: Research Approach

The research used an integrated, four-stage sequential mixed methods design (summarised in figure 1.1). Ethical approval for the programme of research was granted by Liverpool John Moores University (LJMU) Research Ethics Committee (REC). A questionnaire was completed by 931 young people across six schools and sixth form colleges in a single county in the North West of England. A netnographic study analysed 133 videos from the seven most popular YouTubers identified by the questionnaire respondents. Focus groups were completed with 85 13-18-year olds and semi-structured Skype interviews completed with three YouTubers.

The data from each of the four research studies were analysed separately. Questionnaire data were entered into SPSS (version 23) where they were cleaned and analysed using descriptive statistics, parametric and non-parametric tests and ordinal logistic regression. Focus groups and interviews were transcribed verbatim in NVivo (version 11) (QSR International 2015) and YouTube videos and comments were imported directly into NVivo using the NCapture tool where the videos were transcribed verbatim. The findings from all four studies were integrated using Farmer et al's (2006) triangulation protocol. The triangulated findings were presented in relation to each of the five research objectives. Bryman (2012) and Shenton's (2004) frameworks were applied to ensure the validity and trustworthiness of the quantitative and qualitative research respectively. The final integration of the research findings was mapped to Onwuegbuzie and Johnson's (2006) nine forms of legitimization for mixed methods research.

Figure 1.1: Research Design



1.4: Position of the Researcher

At the beginning of the research process, I reflected upon the role and positions I held and how this could impact upon the research I was undertaking. Prior to commencing my PhD, I had worked as a researcher in public health for seven years and, during this time, I had worked on numerous research projects relating to young people's health. I am also part of the first generation to have access to social media in their teens. The once predominant social media platform Myspace was released the year I became a teenager and I made frequent use of it during high school. In the year I turned 18, YouTube was launched and Facebook made available to UK university students and both platforms were integral to the way I made and maintained social connections and sought information during my time as an undergraduate. Therefore, I had both professional and experiential knowledge that would underpin my understanding of the research topic. However, I was also aware that this experiential and professional knowledge could frame my view of the research and so impact upon the exploratory nature of the study.

I took several steps to ensure my experiences and knowledge did not adversely impact the study. I developed a conceptual framework based on the existing evidence (chapter 2) and I constantly revisited this framework throughout the course of the research to frame and focus my interpretations. In addition, all three members of the supervisory team reviewed all elements of research at regular intervals including the design, the interpretation of the study findings and final triangulation. Throughout the research process, I kept a research diary which contained both reflective and reflexive accounts where I respectively explored my thoughts at various stages of the research (reflective) and acted upon these reflections (reflexive). Excerpts from this diary have been included throughout the thesis as reflective and reflexive "stop-offs" which further illustrate this process. As these stop-offs indicate, while my role as researcher was my primary focus, this does not mean I dismissed my previous experience and knowledge. In summary, I adopted a position of "critical subjectivity" (Reason 1994) in which I was aware of and articulated my perspectives and biases but did not allow them to overwhelm the programme of research.

1.5: Contribution to research

This study is the first to explore the role professional YouTubers play in young people's (13-18 years) health behaviours in the UK. It therefore provides unique insights into this issue that can make an important contribution to young people's health improvement knowledge and practice.

The research used a mixed method design, which has seldom been used in the existing literature on young people's engagement with social media. By integrating qualitative and quantitative data in both online and offline settings, from young people and YouTubers, it therefore provides broader and deeper understanding of the complexity of this issue which has not been achieved by existing research. Each study also makes a unique contribution to the evidence base. Study 1 is the first large scale (n=931) questionnaire study to explore young people's engagement with YouTubers and the health content they produce. It is the first study that can provide quantitative trend data on these practices and identify differences according to demographic characteristics. Study 2 differs from existing netnographic studies of YouTube content because it did not rely simply on YouTube's search function to sample health content but used responses from young people (study 1) to guide the sampling frame. It therefore achieves a more targeted understanding of the content being most regularly viewed by young populations. By focusing on YouTubers (rather than the full range of available health content) and using thematic analysis it allows for a more nuanced understanding of this content. The study is also the first to combine video (n=133) and comment (n=130,000) data on a large scale, providing insights on the relationship between YouTubers and their audience which thus far has not been reported. Studies 3 and 4 are the first to qualitatively explore the perceptions of young people and YouTubers in relation to YouTuber health content.

The research is the first to confirm that many young people have encountered YouTuber health content (70%) and used YouTube for health advice (47%). The research provides new insights into the multiple ways in which young people engage with this health content. Young people both actively and passively encounter YouTuber health content and the type of information they engage with and seek out varies according to gender, age and self-reported

health status. Young people found YouTuber health content appealing because it enabled them to find shared, relatable experiences in a personable tone that was perceived to be sincere. Young people often viewed YouTubers in terms of a peer. YouTubers' perceived authenticity and truthfulness influenced how appealing young people considered their health content, particularly among young people who were regular viewers. This research is the first to consider how the para-social relationships that exist between online influencers and their audience could influence young people's interaction with the health content they produce.

The research also provides an understanding of the nature of YouTuber produced health content, which until this point had been largely anecdotal. YouTuber health content often covers sensitive health topics (such as mental health and sexual health), presents contrasting dialogues of risk behaviours and often contains highly commercialised messages of health and wellbeing. YouTubers appeared successful in creating a sense of community among their viewers, raising awareness, reducing stigma and communicating, challenging and reinforcing social and gendered norms. The research also extends our existing understanding of young people's online critical appraisal skills. While there were some positive findings in relation to young people's confidence and practice of critical appraisal there are still concerns about their ability to distinguish between commercial and non-commercial sources. Confidence in assessing the accuracy of YouTuber health content increased with age (study 1); young participants were more likely to confuse YouTuber credibility with accuracy, particularly when regular viewers (study 3). However, younger regular viewers were more critical of commercially sponsored YouTuber content while older participants accepted it more readily as the way in which YouTubers made their living. This suggests YouTuber content may have practical uses not only communicating health improvement messages but also improving young people's critical appraisal and literacy skills.

This research is the first to gather insights from YouTubers on their perceived role in health promotion. While YouTubers' early motivations for producing health-content were often driven by a need for self-expression or a lack of existing information, their motivations to continue to do so often combined personal connection, altruistic benefits for their audience, self-branding interests and financial gain. YouTubers frequently share their health experiences but appear more reluctant to give health advice and instead signpost their

audience to alternative sources of information. Young people often viewed YouTubers as role models, but YouTubers were concerned that this title afforded them a level of expertise they did not have. They expressed concerns that they could misadvise or harm, fears of criticism or misinterpretation and undue pressures on their own wellbeing. Despite wide awareness of their young audience, YouTubers in this research exhibited varied regulatory practices with financial and self-branding concerns often competing with their sense of ethical responsibility. Additionally, their engagement in health collaborations was universally dependent on the financial incentives and level of autonomy they could retain over the content produced.

This research is the first to systematically integrate the findings from mixed methods studies in order to provide a more thorough understanding of the complex role YouTubers play in young people's health behaviours. By providing these unique insights, the research provides vital information that can be used to inform the design of health promotion interventions that make use of professional YouTubers. Given the increasing popularity of YouTubers and current trends towards using them in young people's health improvement in the UK (Public Health England 2017), these research findings make a timely and invaluable contribution to the currently sparse public health evidence base in this area.

1.6: Overview of the thesis

Chapter 2: Presents a review of the literature relevant to young people's engagement with YouTuber produced health content. The chapter begins with an overview of the research on young people's social media use and health: including the health risks and benefits of social media, young people's online health information seeking and the use of social media in health interventions for young people. The chapter then reviews the existing evidence on YouTube and YouTuber produced content. The key theoretical concepts relating to young people's engagement with YouTuber health content are introduced and the chapter concludes with the conceptual framework that was developed to guide the research.

Chapter 3: Presents the methodology for the research. The underpinning pragmatic philosophy and the mixed methods are described. It provides an overview of the overall four stage sequential mixed methods design including how the individual methods and results

were integrated and triangulated respectively. The rationale for each of the individual study methods is then described. The ethical considerations of research with young people and of online research are reviewed and the chapter concludes with the steps undertaken to ensure the validity and trustworthiness of the research process.

Chapters 4,5,6,7: Present the results of each of the four research studies. Each chapter begins with an overview of the data collection methods and analysis followed by the results from each study. The chapters conclude with a discussion of the findings in relation to the existing research evidence and the limitations of each individual study.

Chapter 8: Presents the triangulated findings from the four studies and the steps taken to ensure rigour during the triangulation process are described. The findings were brought together using the triangulation protocol (Farmer *et al.* 2006) and presented according to research objectives one to four. The findings are synthesised to consider the potential contribution YouTubers could make to health improvement interventions for young people (objective 5). The limitations of the research are considered.

Chapter 9: Presents the conclusions of the research including how this was strengthened by the conceptual framework. Recommendations for practice, policy and future research are presented.

Chapter 2: Literature Review

2.1: Aim of literature review

The aim of this research was to examine the role professional YouTubers play in young people's (13-18 years) health behaviours in the UK. In particular, the research sought to understand the ways in which young people engage in YouTuber produced health content and the impact they believe this has on their health behaviours. Furthermore, it examined the health content produced by YouTubers and explored their perceived role in the communication of health messages to young people. The research aim was developed from a critical review of the literature, which considers the two populations key to this study: young people and YouTubers in turn. Section 2.3 concentrates on social media and young people focusing on how they engage with health information and the impact this has on their health behaviours. Section 2.4 critically reviews the available evidence on YouTubers and health; focusing on the content they produce and their potential for health promotion. The findings from these two sections are then synthesised, through consideration of appropriate behaviour and wider theory, to create a conceptual framework for the research.

2.2: Literature search strategy

The narrative literature review (Grant and Booth 2009) followed Kable et al's (2012) twelve step approach. The purpose statement for the literature review is outlined above. A search of the databases Medline, Scopus, PyschInfo and Web of Science was initially undertaken in June 2016 and repeated throughout the three-year research period to locate any additional recent publications. To increase the likelihood of identifying all relevant studies, Google Scholar and SAGE Research Case Study searches were also conducted and the reference lists of retrieved articles were hand searched. Relevant academic books, grey literature and conference publications were also included. The search was limited to English language articles and initially those published from 2005-2019 (2005 being the date YouTube was created) although some older articles identified through reference searching were also included if they were deemed particularly relevant.

As indicated by the literature review aim, due to the multi-disciplinary nature of the research and the small number of studies focusing specifically on YouTubers, the scope of the literature review had to be widened. Literature from public health related disciplines as well as digital sociology and media and communication studies were included. The inclusion criteria were systematic reviews and original research studies that reported on young people's health seeking practices on social media, social media-based health interventions for young people and YouTube health content and practices. The search terms used to search the databases (article title, abstract and article) were YouTuber, YouTube and vlogger, social media and social networking sites. Initially only studies in young adult populations (age 11-25 years) were included but in areas where the literature was sparse, studies in the general adult population (16-59 years) were also included. Studies in older adults (60 years and over) and children under 10 years were excluded. All article abstracts retrieved were assessed for relevance using the inclusion and exclusion criteria to identify the papers relevant to the review. Quality appraisal of the selected literature was undertaken using the qualitative or quantitative Critical Appraisal Skills Programme checklist (CASP 2018) relevant to each study design. A summary table of the literature meeting the quality criteria was created according to the main issues and themes arising from the literature. This was used to develop a critical synthesis of the literature. Following the review, the reference list was checked for accuracy and accessed web links were updated.

2.3: Social media and young people

Through digital technologies young people are participating in a whole range of activities including social media, blogging, video blogging ("vlogging"), gaming and downloading, uploading and collaborating on a range of creative content (James *et al.* 2009). In the UK, 93% of 16-24 year olds report using social media in the past 3 months (Office for National Statistics 2019) and among 12-15 year olds, 69% have a social media profile (Ofcom 2019a) Social media presents a range of opportunities and risks for young people. Adolescence is a period of both uncertainty and transition as young people strive to achieve a personal identity by social interaction, seeking belonging and symbolic consumerism (Stead *et al.* 2011; Ellison 2013; Atkinson *et al.* 2016). As a result, young people increasingly encounter health risk resulting from factors including: peer pressure, societal pressure, personal vulnerability or lack of

information. As they use social media they are continually navigating and redefining the ethical fault lines of identity, privacy, ownership/authorship, credibility and participation (James *et al.* 2009) and the impact of social media on young people's health is implicitly caught up in these issues.

Risks and opportunities

There is powerful discourse about the health risks that social media poses for young people with some commentators going so far as to describe it as threatening or destroying childhood (Buckingham 2008). Critics of digital technology refer to a wide range of physical and psychological impacts including addiction, obesity, antisocial behaviour, educational underachievement, stunted imagination and commercial exploitation (Buckingham 2008). In addition, some health risks directly related to social media use have been identified, including: the sexualisation of young adults (including exposure to pornography, risk of sexual solicitation and sexting), exposure to violence through computer games, contact with strangers and cyberbullying (Buckingham 2008; Carroll and Kirkpatrick 2011; Ringrose *et al.* 2012; Cabinet Office 2014; Livingstone and Smith 2014).

The evidence on the impact of social media on young people's wellbeing remains contradictory largely due to a lack of robust causal evidence. A systematic review of 43 studies measured a range of benefits including increased self-esteem, perceived social support, increased social capital, safe identity experimentation and increased opportunity for disclosure, as well as harmful effects including increased exposure to harm, social isolation, depression and cyberbullying. However, most studies reported no or mixed effects (Best *et al.* 2014). Best *et al.* (2014) group these studies into 3 categories: 1) communication-based approaches which focus on the quality of online communication and comparisons between online and offline approaches 2) social network and system-based approaches which focus on social support, social capital but also concerns about triggering and 3) adolescent development approaches which focus on self-esteem.

Communication based studies have focused on a range of areas including exposure to peer behaviours and online marketing. Empirical studies have found that exposure to friends' online photographs, and portrayals of drinking alcohol and alcohol marketing on social media,

increased young people's risk levels for drinking (Huang *et al.* 2014; Moreno and Whitehill 2014). Similarly, experimental body image focused studies show exposure to images on Facebook lead to more negative mood and appearance comparison than control (Fardouly *et al.* 2015); and peer normative processes can significantly influence body image concerns (Perloff 2014). Social networking and adolescent development approaches present a range of contrasting results. Systematic reviews suggest a small but statistically significant relationship between social media use and depressive symptoms in young people (McCrae *et al.* 2017) and that certain behaviours on social media, such as receiving and seeking negative feedback and uploading pictures which invite comparison, were related to higher levels of depression, anxiety (Seabrook *et al.* 2016), self-harm (Marchant *et al.* 2017) and body image and eating concerns (Holland and Tiggemann 2016). However, the authors of all these systematic reviews acknowledged that sample sizes and outcomes measured vary across the empirical studies. In particular the predominance of cross-sectional studies and limited duration of existing longitudinal studies makes it difficult to make any conclusions about any causal relationship between social media and risk among young people (Dyson *et al.* 2016; Holland and Tiggemann 2016; Marchant *et al.* 2017; McCrae *et al.* 2017; Marino *et al.* 2018).

In recent years, debate has also moved to consider social media as a tool of empowerment for young people (Buckingham 2008). It has been suggested that moderate use of technology can have positive impacts including improved social connectedness/capital and wellbeing (Cabinet Office 2014). Social media has led to new ways of forming identity (boyd 2008; Buckingham 2008) through new styles of communication and interaction and forming community (Buckingham 2008; Ito *et al.* 2010; Carroll and Kirkpatrick 2011). Young people can use social media to extend friendships, explore social status and romance, and to find support that they might lack in offline relationships particularly among those who are marginalised such as LGBT youth (Carroll and Kirkpatrick 2011). Social media has also led to new forms of literacy and learning as young people are able to increasingly learn through informal channels and from each other (Buckingham 2008; Ito *et al.* 2010; Miller *et al.* 2016).

The existing research on positive health outcomes associated with young people's social media use remains relatively scant although systematic review studies have pointed towards some benefits. Positive interactions, social support and social connectedness on social media

have been consistently related to lower levels of depression and anxiety among young people (Seabrook *et al.* 2016) and offer increased opportunity to communicate distress particularly to peers (Marchant *et al.* 2017). Existing empirical studies have largely focused on online health communities for particular illnesses and conditions. For example, an online survey with patients on an epilepsy forum (n=221) found the majority felt they could find patients with the same symptoms and gain better understanding of symptoms and treatment with the number of benefits experienced significantly associated with the number of relationships with other patients. A qualitative study of two young people's online bulletin boards (focused on teen health and sexuality) similarly found these boards were a valuable source of personal opinions, support, information and suggested actions (Suzuki and Calzo 2004). As with the evidence on risk, the small scale and varying methodological quality of existing studies make it difficult to reach firm conclusions about the relationship between social media and benefits for young people. Young people also appear aware of the mixed evidence on risks and opportunities, in a focus group study with 18-25 year olds in the US, Vaterlaus *et al.* (2015) reported young people saw social media as "*a double edged sword*" in relation to exercise and diet, with content judged as motivating and inspiring but also a potential barrier and vulnerable to misuse.

Overall, the existing evidence suggests the impact of social media and internet use on young people's risk behaviour is nuanced (Hagell and Coleman 2014) and there is currently insufficient evidence on what the causes and impacts of these risks might be (Ringrose *et al.* 2012; Cabinet Office 2014; Livingstone and Smith 2014). A recent secondary analysis of data from three large surveys (Millennium Cohort, Youth Risk and Behaviour Survey, and Monitoring Youth, n=355,358) found that the association between social media use and adolescent wellbeing, while negative, accounts for only 0.4% of the variation in wellbeing (Orben and Przybylski 2019). New social media technologies and practices have changed the *pathways* to risk but this does not necessarily mean there has been an increase in risk or negative outcomes (Cabinet Office 2014; Livingstone and Smith 2014). To some extent, social media can simply be seen as another arena in which young people seek independence, interaction with their peers and enhancement of their social status (Hagell and Coleman 2014).

Social media as a source of health information

It is clear that young people now have an immediate and almost unlimited source of health and wellbeing information at their fingertips. An individual's decision on which source of health information to use is based on several factors including the source's medical expertise, accessibility, anonymity and tailorability (providing information unique to an individual's situation) (Ruppel and Rains 2012). Large scale qualitative (Skinner *et al.* 2003) and quantitative studies with Australian young people found help-seeking varied with age, gender and geographical location (Booth *et al.* 2004; Carrotte *et al.* 2015). One third of participating females and two thirds of males in Booth *et al.*'s (2004) focus group study would generally not seek help for their health concerns and when they did, trusted individuals such as friends and family were preferred. Their findings agreed with a systematic review of 22 studies (Gulliver *et al.* 2010) which suggests that confidentiality (including embarrassment, fear and stigma), knowledge of services, problems recognising symptoms (poor health literacy), and discomfort disclosing concerns (including a preference for self-reliance) were the most common barriers to help-seeking among young people. Facilitators to help-seeking are comparatively under-researched but positive past experiences, social support and encouragement from others all appear to aid help-seeking (Gulliver *et al.* 2010).

Online health information and social media are now one of many sources of health information for young people (Gray *et al.* 2005b). A recent UK study of 13-18 year olds (n=1,346) found 63% thought social media was a good source of health information (Goodyear *et al.* 2018a). International survey data suggests that 57% of teens use their online social network for advice (Nielsen 2009) with 31% searching for information about health, dieting or physical fitness concerns and 17% using it to gather information on topics they find hard to discuss such as drug use and sexual health (Lenhart *et al.* 2010; Carroll and Kirkpatrick 2011). However, there remain few studies which provide a robust account of the health-related content young people are accessing, attending to, sharing and creating on social media (Goodyear *et al.* 2018b). Qualitative studies with young people suggest they use social media to access a range of information on topics including medical conditions, body image and nutrition, physical activity, sexual health, mental health and violence and personal safety (Skinner *et al.* 2003; Carrotte *et al.* 2015; Fergie *et al.* 2015; Goodyear *et al.* 2018b). In

Goodyear et al's (2018b) UK mixed participatory study, young people (n=1,296) identified five types of social media health content that influenced their understanding: automatically sourced content, suggested or recommended content, peer content, likes and reputable content.

Large scale focus group studies with young people in the UK (Gray *et al.* 2005a; Fergie *et al.* 2013), US (Gray *et al.* 2005a), Canada (Skinner *et al.* 2003) and Australia (Byron *et al.* 2013) found young people's main concerns were finding high quality, salient, personally relevant ("relatable") and reliable health information on social media. The reliability of social media health information was strongly tied in with young people's perceptions of credibility, which was defined in terms of the source's expertise, trustworthiness and empathy (Gray *et al.* 2005a; Fergie *et al.* 2013). Fergie et al (2013) found that young people's strategies for judging social media credibility were more complex than their evaluation of factual online health sources (which included logos, URLs, organisation information section, language and presentation). Judgements on the credibility of health-related social media sources combined the everyday-use quality markers (numbers of likes, views etc.), others' behaviours and interactions with the source, and correction and quality control actions taken by other users. Despite these credibility concerns, young people also identified some advantages of social media health content including that it was anonymous, convenient and could facilitate peer support and connection to online health communities (Fergie *et al.* 2013).

As Yonker *et al.* (2015) identified, in a review of 87 studies, the majority of empirical research focuses on how young people engage with health information on social media. However, few studies look at their more participatory practices including the health information they share and create (Goodyear *et al.* 2018b). The majority of studies exploring participation in online communities focus on online forums and message boards, for particular health concerns and conditions, and among adult populations. Systematic reviews have identified several benefits to online participation including empowering patients through self-management and increased esteem, feeling supported, emotional and personal expression and visualising disease (White and Dorman 2001; Ziebland and Wyke 2012; Smailhodzic *et al.* 2016). Participation in online health communities is complex and varied. A systematic review of 20 studies identified 41 proposed participation styles (Carron-Arthur *et al.* 2015) and an online

survey of participants in a large, general health community found enjoyment, efficacy, learning, personal gain, altruism, community interest, social engagement, empathy, reputation and reciprocity all impacted participation (Oh 2012). Yan *et al.* (2016) in their study of two Chinese online health communities found three factors impacted positively on sharing of general and specific health knowledge: a sense of self-worth, perceived social support and reputation enhancement. A fourth factor, face concern was found to increase general knowledge sharing and reduce sharing of specific knowledge. Qualitative studies of individuals with health conditions agree that generating health content is a balance between their needs and managing their self-presentation online (Newman *et al.* 2011; Fergie *et al.* 2015).

Overall, the existing evidence suggests that social media presents a promising venue for young people's health improvement but that these actions must consider the complex ways in which young people use social media, including for identity presentation (Skinner *et al.* 2003; Vaterlaus *et al.* 2015). For example, an Australian focus group study with 16-22 year olds suggested that conventional approaches to sexual health promotion on social media would be unpopular due to young people's careful self-presentation, privacy concerns and the stigma surrounding sexual health (Byron *et al.* 2013; Byron 2014; Byron 2015). This issue is considered in greater detail in the review of existing social media health interventions below. However, the evidence also points towards another role for professionals involved in young people's health information seeking which must be considered first. Namely, assisting young people in identifying pertinent sources of information and developing the critical appraisal skills to assess the quality of social media health information (Skinner *et al.* 2003; Goodyear *et al.* 2018b).

Young people's literacy in relation to social media health information

Undoubtedly, as access to good quality health and wellbeing advice has increased, so too has exposure to misinformation. There are concerns about young people's ability to evaluate the quality of online health information and identify reliable and trustworthy sources (Bartlett and Miller 2011). A 2018 national survey found that 30% of young people aged 12-15 years

said that all or most of the information on social media sites or apps is true compared with 24% the previous year (Ofcom 2019b).

The concept of health literacy, which emerged around four decades ago, broadly describes the constantly evolving conceptual models concerned with individual knowledge and competency to deal with the complex demands of health in modern society (Sorensen *et al.* 2012; Rudd 2015). Health literacy is defined as: the social and cognitive skills that determine an individual's ability and motivation to access, understand and use information to promote and maintain good health (Nutbeam 1998; Nutbeam 2000). The growth of both the internet and social media has increased our access to diverse health information of varying quality. Evidence suggests considerable variation in our individual ability to evaluate both the trustworthiness and relevance of this information (Chen and Lee 2014; Correa 2015). Inequalities in online health information seeking, which fall under the broader term "the second digital divide"(Correa 2015), exist across all age groups and are influenced by a number of factors including: experience, attitudes towards the internet and technologies, motivation, self-efficacy, self-reported skills and autonomy of use (Eastin and LaRose 2000; Hassani 2006; Chen and Lee 2014; Correa 2015; Blank and Lutz 2017; Reisdorf and Groselj 2017). In particular, there appear to be differences in "instrumental internet use" (Papacharissi and Rubin 2000), such as using the internet to seek health information, participate in online health support groups or communicate health issues (Chen and Lee 2014). For young people, this intersects with their position in the UK education system, parental education, ethnicity and gender to produce digital practices that follow the contours of class and gender (Davies *et al.* 2017). Evidence suggests that young people from lower-socio economic groups tend to use social media and the internet more frequently but for less capital enhancing activities such as gaming and social interaction (Livingstone and Helsper 2007; Duggan and Smith 2014; van Deursen and van Dijk 2014; Correa 2015).

As social media and the internet become more embedded in our everyday lives, the conceptual boundaries of health literacy are becoming increasingly blurred with media literacy. Media literacy is explicitly concerned with our "*ability to understand, analyse, evaluate and create media messages in a wide range of forms*" (Aufderheide and Firestone

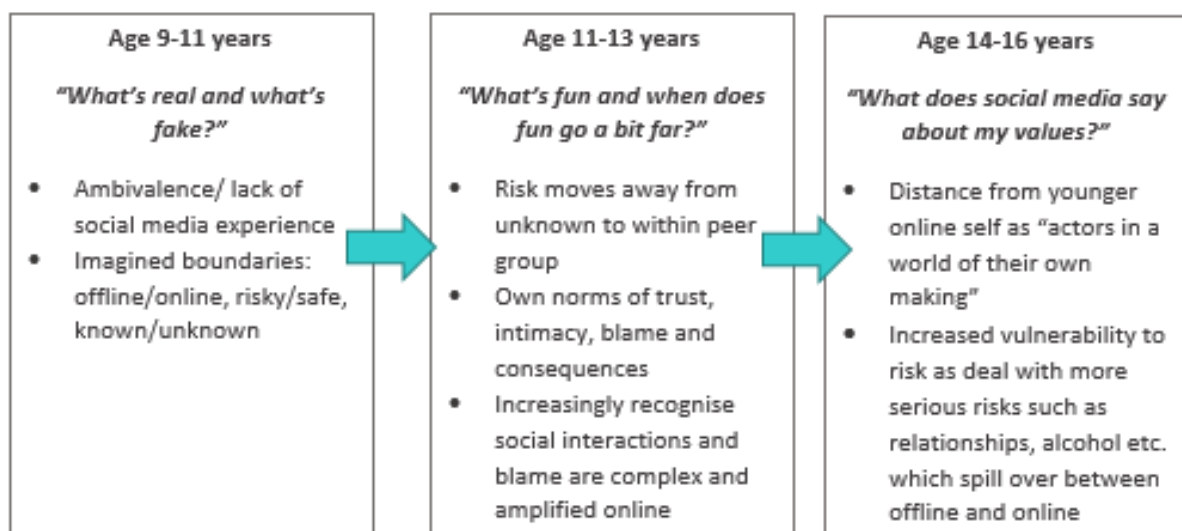
1993; Livingstone 2004; Bulger and Livingstone 2013) and there have been renewed international (Bulger and Livingstone 2013) and national (House of Lords 2017) efforts to promote these skills particularly among young people and in relation to digital media. However, there remains a lack of consensus on the purpose of digital media literacy. Does it aim to reduce the influence and use of digital media by arming young people with the critical skills to protect themselves from persuasion (Valkenburg 2004; Livingstone 2014)? Or is it more concerned with developing young people's critical analysis skills so that they are empowered to participate in all that social media has to offer (Jenkins 2006; Drotner and Livingstone 2008; Livingstone 2014)? This debate is entangled in ideological, political and economic perspectives on media literacy and in particular whether the aim is to produce a traditional hierarchy of good, authorised information versus bad, unauthorised information or promote a more democratic and diverse approach to online representation (Livingstone 2014).

Social media literacy

Research on young people's social media use is increasingly focusing on the relationship between its affordances as a technology and the social norms of identity, trust and reputation (Hillier *et al.* 2012; Madden *et al.* 2013; Litt and Hargittai 2014; Marwick and boyd 2014; Atkinson *et al.* 2016). Peers and adults such as parents and teachers also affect young people's experiences of online risk by sharing knowledge, attitudes, behaviours and social norms through the processes of co-using, and restrictive and active mediation (Livingstone 2011; Shin and Lwin 2017). European survey data confirms that parental mediation decreases and peer influence increases with age (Inchley *et al.* 2017; Shin and Lwin 2017) and while teachers' internet related discussions can reduce vulnerability to risk, peer interactions may increase young people's exposure (Shin and Lwin 2017). A key example of this is Marwick and boyd's (2014) work on online "drama" among teens. Drama is a vernacular term used to describe a performative and iterative form of interpersonal conflict (Ito *et al.* 2010) which allows young people to experiment with the boundaries of acceptable behaviour online (Livingstone 2008). While drama has many similarities to bullying it is viewed as distinct as it is acted out (Goffman 1959) among peers (Ringrose *et al.* 2012) for their networked public.

Livingstone et al (2014) have developed a pathway which conceptualises young people’s (9-16 years) social media literacy in relation to their interactions with risky opportunities (figure 2.1). The model structure is particularly influenced by early work on television literacy in children (Dorr 1986; Elias and Lemish 2008) which are in turn framed around Piaget’s (1964) stages of cognitive development. While, the application of this type of “ages and stages” approach to social media has been criticised as overly teleological and mechanistic and insufficiently social (Buckingham 2008), research on digital media literacy remains in its infancy and Livingstone et al (2014) provide a useful framework for research on young people’s use of social media (figure 2.1).

Figure 2.1: Young people's pathway for developing social media literacy



Based on Livingstone (2014)

As illustrated in figure 2.1, Livingstone et al (2014) propose that as young people mature their concept of risk moves away from the threat of online strangers to recognise that risk can come from within their own peer group. At age 11-13 years, the concept of online drama (Marwick and boyd 2014) is revisited with young people increasingly experimenting with the boundaries of acceptable social behaviour through blame, intimacy and trust. Young people thus begin to develop their own rules and norms and, through their increasing recognition of the complexity of blame and social interaction online, they develop resilience against risk. By age 14-16 years, young people are making judgements about the meaning and context of

their online interactions but despite increased resilience, they also are increasingly vulnerable as their lives become more complex. As they deal with more serious risks and harms, for example through relationships, sexual activity and alcohol, there is the potential for their emotional vulnerability to spill over between online and offline interactions. Livingstone et al (2014) highlight through this model that young people's progression through online opportunities and risks are influenced by the interaction between young people's social development and the affordances of particular social media.

Mass media interventions

Mass media campaigns in public health have been used for many decades (Noar 2006) to expose high proportions of large populations to messages through routine use of existing media (Wakefield *et al.* 2010). Rogers and Storey (1987) define them as *"a campaign which intends to generate specific outcomes of effect in a relatively large number of individuals usually within a specified period of time and through an organised set of communication activities"* (p821). Each new mass media campaign enters an already crowded media environment where they must capture public attention and encourage initiation and changes in behaviours while competing with factors such as pervasive product marketing, social norms and entrenched behaviours driven by habit and addiction (Randolph and Viswanath 2004; Wakefield *et al.* 2010). Therefore, there has been growing recognition since the early 2000s, that campaigns must use theory as a conceptual foundation and make use of the existing evidence on effective campaign principles (Noar 2006). In particular, campaigns should be informed by formative research and message pre-testing with the target audience, segment their audience according to meaningful characteristics and use targeted messages which spark discussion and persuade individuals important to the target audience (e.g. influencers). There is evidence to suggest that discussion of campaign messages with others has more influence on individuals than direct viewing of messages which suggests a role for social media (Noar 2006). Campaigns must also be strategically placed on channels widely used by the target audience and be accompanied by process review and sensitive outcome design (Randolph and Viswanath 2004; Noar 2006).

Meta-analysis studies are beginning to amass evidence that well-executed and targeted mass media campaigns can have small to moderate effects on health beliefs, knowledge and also behaviours (Noar 2006; Wakefield *et al.* 2010; Robinson *et al.* 2014). However, the effects of mass media campaigns are difficult to evaluate as many campaigns make use of multiple channels and media and non-media components in collaboration to increase the chances of success. The effects of mass media campaigns alone therefore remain insubstantially evidenced (Noar 2006; Wakefield *et al.* 2010). Wakefield *et al.* (2010) conducted a review of 40 systematic reviews that demonstrated that mass media campaigns to address health risk behaviours can result in positive changes and prevent negative changes across large populations. However, the authors concluded that an important contributor to these outcomes is the concurrent availability of the necessary services, products, and community-based programmes alongside policies that support behaviour change. For example, a systematic review of 22 studies which combined mass media campaigns with the distribution of health-related products showed a favourable change in the use of these products (median= 8.4%, range 4% for condom distribution to 10% for smoking cessation) (Robinson *et al.* 2014). However, these reviews also suggest that investment in longer, better-funded campaigns is required to achieve adequate population exposure to media messages (Wakefield *et al.* 2010).

As highlighted by the existing evidence on mass media campaigns, targeting audience segments on the most widely used channels and making use of both influencers and interpersonal discussion to increase the reach and impact of campaigns all suggest social media might be an effective medium for health interventions. However, given that social media has existed for far less time than other mass media, the evidence on their effectiveness in interventions is comparatively less well established.

Social media health interventions

Broad scoping reviews have identified several uses for social media in public health and health promotion including: providing information on health conditions, answering medical questions, allowing dialogue between patients and health professionals, collecting data on patients' personal experiences to inform interventions, health promotion, health education,

reducing stigma and providing online consultation (Neiger *et al.* 2012; Moorhead *et al.* 2013). Neiger *et al.* (2012) conclude from their review that while social media cannot be viewed as the solution to all the complexities of promoting behaviour change and improving health outcomes, it certainly has potential to enhance engagement and communication, as well as improving capacity to promote health related programmes, products and services. A systematic review of social media use in child health (25 studies) found that the majority targeted adolescents (64%), made use of discussion forums (68%) and often included social media as a component of a complex intervention (64%) (Hamm *et al.* 2014). A systematic review of 11 studies identified four advantages of using social media for adolescent interventions: the ease of access to young populations, the cost-effectiveness of recruitment, the ease of intervention and as a reliable screening venue for mental health status and high-risk behaviours (Park and Calamaro 2013).

However, social media based intervention studies remain largely in their infancy. Large scale literature scoping studies highlight that evidence on their effectiveness remains largely unestablished due to considerable variations in target populations, methods and outcomes measured (Korda and Itani 2013; Moorhead *et al.* 2013). Systematic reviews looking at a range of social media based health interventions suggest that the most commonly used social media sites were Facebook, blogs, forums and Twitter (Gold *et al.* 2011; Chang *et al.* 2013; Maher *et al.* 2014; G. Williams *et al.* 2014; Patel *et al.* 2015; Shaw *et al.* 2015; Naslund *et al.* 2016; Nour *et al.* 2017) alongside intervention-specific sites (Maher *et al.* 2014). YouTube based interventions remain underrepresented, with only two of 28 systematic reviews including YouTube based studies (Patel *et al.* 2015; Nour *et al.* 2017). These reviews also highlight that social media is often used as a single component of complex or multicomponent interventions (Hamm *et al.* 2014; G. Williams *et al.* 2014; Klassen *et al.* 2018) for example: a peer-to-peer online community as part as psychoeducational programmes (Eysenbach *et al.* 2004). These multi-component intervention designs make it challenging to isolate if observed intervention effects are due to the social media element (Eysenbach *et al.* 2004; Laranjo *et al.* 2015). In addition most studies are exploratory or descriptive in nature (Moorhead *et al.* 2013), and are not theory led (Korda and Itani 2013; Laranjo *et al.* 2015) with the heterogeneity of study designs and outcomes often meaning meta-analysis is not possible (Chang *et al.* 2013; Korda and Itani 2013; Rose *et al.* 2017). Furthermore, a review by Gold *et al.* (2011) suggests that the

majority of social media health promotion activities go unreported, with only one of the 178 sexual health promotion activities they identified published in the scientific literature.

Similarly, systematic review studies suggest the outcomes of these studies are variable. Systematic reviews with a broad health focus have found some positive impacts on knowledge, attitudes, subjective norms, self-efficacy, social support, health behaviours and clinical outcomes although effect sizes were generally small and results inconsistent across studies (Korda and Itani 2013; Laranjo *et al.* 2015). For example, a review of 42 studies on social media to manage chronic conditions found that 48% of studies indicated direct benefit, 45% were neutral and 7% suggested harm (Patel *et al.* 2015). Systematic reviews with a broad health focus among young populations are scarce and similarly suggest mixed evidence (Hamm *et al.* 2014; Shaw *et al.* 2015) with Hamm *et al.* (2014) reporting that 80% of studies (n=25) presented positive conclusions but with little high quality evidence of improved outcomes to support these claims.

The largest proportion of systematic reviews for young people focused on social media interventions in three areas: sexual health, mental health and nutrition and weight management. Two systematic reviews looked at sexual health promotion using social media among young people (13-34 years) and found preliminary evidence of increased knowledge of sexually transmitted infection prevention (Jones *et al.* 2014) and psychosocial outcomes such as condom self-efficacy and delayed initiation of sex (Guse *et al.* 2012). Several systematic reviews have examined social media based mental health interventions for young people focusing on wider mental health (Ali *et al.* 2015; Ridout and Campbell 2018), psychosis (Alvarez-Jimenez *et al.* 2014), depression (Rice *et al.* 2014) and schizophrenia (Välimäki *et al.* 2016). The majority of studies used social media to provide young people with health professional and peer-to-peer support (Rice *et al.* 2014; Ali *et al.* 2015; Ridout and Campbell 2018) and the evidence from these reviews suggests that young people found social media based mental health interventions engaging and usable (Ridout and Campbell 2018). A number of positive outcomes were reported by these systematic reviews including improvements in mental health knowledge (Ridout and Campbell 2018), reduced number of depressive symptoms (Rice *et al.* 2014; Ridout and Campbell 2018) and increased feelings of social connectedness (Alvarez-Jimenez *et al.* 2014; Ali *et al.* 2015), although the quality of

existing studies limits these conclusions. Similarly, systematic reviews looking at nutrition and weight-loss report small effect sizes and low methodological quality (Chang *et al.* 2013; Maher *et al.* 2014; G. Williams *et al.* 2014; Chau *et al.* 2018). Several of the reviews highlight positive nutrition related outcomes (Maher *et al.* 2014; Chau *et al.* 2018; Klassen *et al.* 2018) but no effect on weight related outcomes (Chang *et al.* 2013; G. Williams *et al.* 2014). Klassen *et al.* (2018), in their review of 21 studies suggest young adults appear more open to receiving nutrition related content such as healthy eating or recipe tips on social media but are reluctant to share more personal, weight related information. The most effective interventions appeared to include education, goal setting, self-monitoring and parental involvement (Rose *et al.* 2017).

Summary

In summary, social media appears to be an appealing source of health information for young people and therefore a promising venue for young people's health promotion. Benefits of social media identified in previous studies include increasing social interactions, making more tailored information available and accessible and increasing peer support (Moorhead *et al.* 2013; Hamm *et al.* 2014). Several limitations must also be acknowledged including monitoring the quality and reliability of health information and maintaining privacy and confidentiality (Moorhead *et al.* 2013). Regarding young people in particular, the existing literature highlights the importance of ensuring they can identify pertinent sources and assess the quality of social media health information (Skinner *et al.* 2003; Goodyear *et al.* 2018b). There is emerging evidence that social media based interventions can lead to positive health outcomes for young people however the research field remains in its infancy and the quality of existing studies is highly variable. Many studies rely on short-term, self-reported data, and have small sample sizes with engagement reported as low as 3% for some studies (Klassen *et al.* 2018) while attrition reached as high as 84% (Naslund *et al.* 2016; Klassen *et al.* 2018). Evaluating these interventions is challenging due to social media metrics not always being appropriate, and difficulties in randomisation and controlling for other influences (Korda and Itani 2013). However, the existing evidence does suggest a number of successful aspects of social media interventions including being based on theory, tailored messages, multiple complementary delivery modes, using interactive and personalised components and providing opportunities for peer support (Korda and Itani 2013; Cotter *et al.* 2014).

There are several gaps in the existing research on social media and health promotion in young people that warrant further investigation. In particular, there is very little research that focuses on specific social media sites to give an indication of their key characteristics or relative effectiveness in relation to young people's health promotion (Moorhead *et al.* 2013). Visual platforms such as YouTube, Instagram and Snapchat are very rarely considered in the existing literature (O'Donnell and Willoughby 2017) despite being extremely popular among young people (Ofcom 2019a; Office for National Statistics 2019). Little research has focused on determining the impact of social media communication on large samples of specific population groups including young people (Moorhead *et al.* 2013). As Shaw *et al.* (2015) highlighted in their systematic review of social media health interventions for young people, developing rigorous methodological processes for intervention design first requires increased knowledge of adolescents' use of "newer" social media for health purposes. This research seeks to address this evidence gap by exploring the impact YouTuber health content has on young people's (aged 13-18 years) behaviours from the perspective of both young people and YouTubers, and contribute to the development of future health promotion interventions. A key aspect of this is understanding the affordances of YouTube and the way in which the platform shapes and limits the types of interactions that are possible for young people (Dyer 2017). The following section will therefore focus more closely on YouTubers and their health practices on the platform.

2.4: YouTubers and Health

The video sharing site YouTube is a social media platform, with over 1 billion users watching hundreds of millions of hours of video daily (YouTube 2018). UK survey data reports 93% of 16-24 year olds have used YouTube in the past 3 months (Office for National Statistics 2019) and 89% of 12-15 year olds have ever used YouTube (Ofcom 2019b). Some commentators have argued that YouTube is not a social networking site in the narrowest sense as the focus is on content creation rather than making and accumulating friendships (boyd and Ellison 2007; Beer 2008). YouTube is not without criticism, for example commentators express concerns that the platform is dominated by corporate media and facilitates a confessional

culture that has led to new forms of cyberbullying (Burgess and Green 2018). However, Burgess and Green (2018) argue that these claims miss a defining characteristic of YouTube, as an intermediary participatory culture where producers and consumers, professionals and amateurs are negotiating and co-constructing their relationships. Wesch (2008) in his ethnographic study of YouTube describes video blogging (“vlogging”) as an expression of self and identity and highlights the way in which this leads to wider interactivity, new forms of community and connected learning. Recent commentators highlight the growing popularity of YouTube among young people (Scobie 2011; Miller 2016) and claim that its importance as a mode of informal learning cannot be overstated (Miller 2016). In a recent UK national survey, 42% of 12-15 year olds said they would turn to YouTube for accurate and true online information about creative activities highlighting the appeal of learning from video content for young people (Ofcom 2019b).

YouTube’s growing popularity among young audiences has led to the rise of the YouTube celebrity (Gamson 2011; Marwick 2015b) or “YouTuber” who uploads both topic based videos and vlogs of their daily lives to a large audience. In the UK, there are approximately 200 YouTubers with more than one million subscribers each (Social Blade 2019). The most subscribed YouTube channel worldwide belongs to Swedish born, UK based YouTuber PewDiePie (82 million subscribers) and over half (n=148) of the 250 most subscribed YouTube channels in the UK belong to YouTubers (Social Blade 2019). The most popular YouTubers are gamers, comedy and satire, style and beauty bloggers, toy reviewers (often by child YouTube stars) and the lifestyle vlogger (Jerslev 2016; Social Blade 2019). Lifestyle vloggers offer advice and share their everyday lives (Jerslev 2016) following on from the webcam culture which began in the early millennium (Senft 2008). While there is a lack of academic evidence on the health content these YouTubers produce, anecdotal evidence and UK press coverage suggests they provide commentary on health issues and share their own health behaviours with a large audience⁵ of predominantly teenagers and young adults (Sheffield 2014; Burgess and Green

⁵ For example: Joe Sugg, Caspar Lee and Jack Maynard open up about mental health and body image in honest video with Mikey Pearce. Metro, 21/09/2019 <https://metro.co.uk/2019/01/21/joe-sugg-caspar-lee-and-jack-maynard-open-up-about-mental-health-and-body-image-in-honest-video-with-mikey-pearce-8371380/>
YouTube stars 'might encourage kids to eat more calories' BBC News 26/05/2018 <https://www.bbc.co.uk/news/health-44258509>
YouTube star Mark Ferris opens up about struggling with an eating disorder: 'I was in a weird space with my body' Metro 20/11/2018 <https://metro.co.uk/2018/11/20/youtube-star-mark-ferris-opens-up-about-struggling-with-an-eating-disorder-i-was-in-a-weird-space-with-my-body-8160952/>

2018). Professional YouTubers could therefore be a particularly relatable source of health information for young people (Beer 2008; Uhls and Greenfield 2012).

This section begins with a brief overview of how YouTube celebrities achieved their popularity, focusing on the characteristics and strategies that make their content so appealing to their young audience. This is followed by an overview of existing studies, which have explored health communication both on YouTube, and by YouTubers. The wider evidence on celebrity health promotion and the use of role models in health improvement is also drawn upon to highlight the role professional YouTubers could play in the communication of health information to young people in the UK.

A brief overview of internet celebrity

The popularity of YouTubers is a result of a change in the concept of contemporary celebrity, which has been linked to the rise of individualism and consumer capitalism. Modern celebrities are increasingly pervasive and visible and often draw more attention through their private lives than the origin of their fame (Turner 2004). Key to this is what Turner (2004) terms the “demotic turn”, where new ways of media production such as social media have allowed celebrity narratives to move beyond elites to the general population. Ordinary people and their lives are represented in the media more than ever before, although Turner (2004) cautions against an overly democratic interpretation of this phenomena. The increase of ordinary people’s lives in the media, he argues, has largely been driven by its capacity to generate revenue for media conglomerates rather than increased diversity. Advertisements and commercial entertainment still populate much of the space on social media. However, Abidin (2018) points to some positive impacts of the demotic turn including promoting ordinary people’s lives, teaching individuals to self-brand, and teaching us to practice empathy and self-reflection by identifying with others, each of which is particularly beneficial when considering the sharing of health narratives. For young people, this has also resulted in new practices of identity formation, as celebrity becomes a reasonable expectation of the everyday, which can become part of their life plans (Turner 2004; Abidin 2018).

While not everyone has the opportunity to gain fame by displaying their everyday lives, for some such as YouTubers, social media has allowed them to bypass corporate structures and earn public attention among interested communities (Khamis *et al.* 2017; Abidin 2018). Initially, “DIY celebrities” (Turner, 2010), such as the ‘camgirl’ webcam stars of the late 1990s and early 2000s (Senft 2008), achieved fame by simply copying the traditional methods of celebrity production on social media (Abidin 2018). However, as social media has proliferated and diversified, a new type of “micro-celebrity” has emerged with characteristics distinctive from the traditional celebrity (Senft 2008; Marwick and boyd 2011; Abidin 2018). Micro-celebrities differ in both interactivity and the performance of authenticity (Marwick 2015a; Arvidsson *et al.* 2016). They present themselves as real, unedited individuals who promote intimacy and interaction with their audience rather than distance. They thus feel a stronger sense of obligation toward their interested community of viewers (Senft 2008; Jerslev 2016; Abidin 2018).

Not all micro-celebrities were able to groom their online hobby into widespread fame (Senft 2008; Abidin 2018). However, for successful YouTubers, changes in social media platforms and online norms over the past two decades have allowed them to transform their micro-celebrity into a fulltime job and brand (Abidin 2018). YouTubers belong to the group of internet celebrities referred to as “influencers”. The term influencers is now common in public discourse and Abidin (2018) defines them as highly branded, vocational online stars who use highly engaging content to maintain a large social media following. Influencers are often producing content across multiple social media platforms to maintain and grow a wide audience, which often surpasses that of traditional celebrities (Abidin 2018).

In summary, YouTubers success has been facilitated by three factors: 1) increased audience predisposition towards seeing ordinary lives in the spotlight 2) their ability to produce content on social media that is not determined or limited by gatekeepers 3) a cultural economy that places almost everything along consumerist lines (including notions of self) (Khamis *et al.* 2017). From a young people’s health perspective, this highlights three areas which are worth further exploration. Firstly, young people’s willing participation in YouTuber’s everyday lives suggests they may be a particularly promising method of communicating information about health behaviours and lifestyle factors. Secondly, the lack of gatekeeper regulation on

YouTuber health content means the quality and accuracy of the content they produce is likely to be variable. Lastly, the consumerist culture of YouTube suggests that YouTubers health related content will be heavily influenced by their desire to maintain audience, profit and fame (Abidin 2018). The remainder of this section will tackle each of these issues in turn by: highlighting YouTuber characteristics and practices that make their content so appealing to young people; reviewing the existing evidence on the quality of YouTube health content and exploring YouTubers current practices when producing health content.

Characteristics of successful YouTubers

Gillin (2008) suggests YouTubers' personal influence can be measured against three criteria: audience participation with the content they post; the frequency with which they post content and engage their audience; and their visibility and prominence in the YouTuber community and wider market. Many other authors' work appears to fit within this general framework. The characteristics which make YouTubers so appealing to their young audience are their practices of content production (Abidin 2016b; Abidin 2017; García-Rapp 2017; Abidin 2018), para-social relationships with their audience (Cocker and Cronin, 2017, Abidin, 2018) and self-branding in the attention economy (Gamson 2011; Khamis *et al.* 2017; Ashman *et al.* 2018).

Abidin (2018) categorises YouTuber content as either "anchor" or "filler" content. Anchor describes a YouTuber's primary content for which they are best known such as gaming, beauty tutorials, comedy sketches etc. These videos tend to involve more preparation and effort, are uploaded to a regular schedule and have higher quality editing, lighting, sound and so on. In contrast, filler content is more spontaneous, such as vlogs or livestreams, which give the viewer an orchestrated insight into the YouTubers' everyday lives. This filler content is deliberately more amateur in aesthetic and quality in order to create a more intimate connection with their audience, a practice termed "calibrated amateurism" (Abidin 2017; Abidin 2018). YouTuber health content can sit within either of these categories. For example, British YouTuber Zoella (the most subscribed female YouTuber in the UK, 12 million subscribers) is well known for the content she produces on her anxiety disorder. In her 2012

video “Dealing with Panic Attacks and Anxiety” (4 million views), she presents her anxiety as anchor content, with a well-prepared discussion of the disorder presented with high quality editing, lighting and sound. In contrast, in a vlog entitled “Sometimes it all gets a bit too much”, Zoe films herself during a panic attack and this unrehearsed, behind the scenes, insight into her anxiety creates intimacy and affirms her authenticity for her audience (Berryman and Kavka 2017; Berryman and Kavka 2018).

Garcia Rapp (2017) describes YouTuber content as embodying two distinct spheres: the commercial sphere and the community-orientated sphere. The commercial sphere contains content-orientated and market-orientated (or anchor content, (Abidin 2018)) and it is through this content that YouTubers strengthen and legitimise their business and pedagogical position. In contrast, the community sphere features relational and motivational videos (i.e. filler content, (Abidin 2018)) where YouTubers have a more reflective and spontaneous heart-to-heart with their audience who are addressed as friends (García-Rapp 2017; Ashman *et al.* 2018). The audience engaging with each sphere differs (García-Rapp 2017). Content-orientated or anchor content due to its easy searchability (through titles, keywords etc.) (boyd 2014) is more likely to attract casual viewers (Burgess and Green 2018) who are introduced to the YouTuber through this content (García-Rapp 2017). Community sphere or filler content (such as vlogs) is more likely to appeal to regular subscribers who are highly interested in the YouTuber themselves as this content brings spontaneity (Elcissor 2012), allows them to identify on a personal level (Burgess and Green 2008) and reinforces social ties (Marwick and boyd 2011). This kind of content tends to attract greater audience engagement with more likes, shares, subscriptions and longer, more personal comments (García-Rapp 2017). García-Rapp (2017) argues it is this community sphere (or filler) content that turns casual viewers into loyal subscribers (Burgess and Green 2018).

This highlights that the development of para-social relations with their audience is key. YouTube is structurally designed to encourage connectivity (Gannon and Prothero 2018) and the affordances of social media allow YouTubers to move beyond the one-sided illusion of intimacy achieved by their celebrity predecessors to opportunities for two-way interaction (Abidin 2018). Abidin (2018) identifies four characteristics, which allow internet celebrities to attract positive or negative attention: exclusivity, exoticism, exceptionalism and

everydayness. While YouTubers may demonstrate each of these characteristics to a varying degree, it is the concept of everydayness which is particularly pertinent when considering how YouTubers effectively communicate with their young audience. Everydayness describes how YouTubers candidly and regularly share ordinary aspects of their lives, which allows a sense of community and trust to be fostered as social capital. They create a space where like-minded viewers can gather and over time this trust can be used to personally endorse other individuals, services or products (Abidin 2018). YouTuber's authenticity allows them to build a charismatic community (Cocker and Cronin 2017) with followers feeling like custodians of the YouTuber's channel who build and sustain the community around them. The personal qualities YouTubers choose to portray must be co-constructed by their followers and spaces for critical commentary and direct para-social contact are vital in maintaining this charismatic community (Cocker and Cronin 2017).

However, as YouTubers become increasingly successful, maintaining this sense of connection with their audience can become more challenging. As YouTubers' creative, unscripted hobbies become bureaucratized, managed and commodified forms of labour, they lose both proximity and interaction with their audience as they progress further along the spectrum towards traditional celebrity (Cocker and Cronin 2017). YouTubers can often find it challenging to engage with traditional media as their content and humour does not easily translate and can be re-appropriated by the press for their own ends (Abidin 2018). Similarly, the searchable, replicable and editable nature of their content opens them up to criticism from an invisible audience (Powers 2015; Abidin 2018). An example of this is 'hate-watch' forums (such as gurugossip.com) which allow viewers to come together to create rumours, critique YouTubers class performances and policing of their bodies and ultimately suggest they are violating audience trust (Powers 2015).

The discussion above highlights that the online success of YouTubers is due to a combination of the shrewd way in which they make content and their effective participation in YouTube's communicative potential (Burgess and Green, 2009). From this success, entrepreneurial YouTubers can generate revenue through advertising and selling their online persona as a brand (Burgess and Green 2008; García-Rapp 2017; Ashman *et al.* 2018) in a role Ashman *et al.* (2018) term the "autopreneur". YouTubers, much like products, self-brand their public

identity as charismatic and responsive to the demands of their audience (Khamis *et al.* 2017). Self-branding is important in the “attention economy” of social media because YouTube is saturated with choice, allowing individual viewers the autonomy to seek out content that interests them (Khamis *et al.* 2017; Burgess and Green 2018). YouTubers must therefore compete with each other, through distinctiveness and visibility, to attain the profitable but limited commodity of online attention (boyd *et al.* 2010; Khamis *et al.* 2017). Social media metrics allow attention to be quantified and qualified (García-Rapp 2017; Abidin 2018). Metrics such as numbers of views, likes, comments and subscribers act as a descriptive marker of popularity (Burgess and Green 2008; García-Rapp 2017; Burgess and Green 2018) but also serve a performative function by reinforcing YouTubers’ visibility, status and ability to command audience attention (Burgess and Green 2008; Marwick 2015b).

The impact of the attention economy on young people is a cause for concern among some commentators (MacDonald 2014; Khamis *et al.* 2017). “Instafame” (Marwick 2015a) has allowed ordinary users to eclipse legacy media popularity among young people by seemingly doing little more than posting a series of attractive selfies. MacDonald (2014) fears an epidemic of self-obsession in which admiration can be achieved through nothing more than good looks, observable consumption and good living, and claims social media is one factor responsible for an increasingly narcissistic society which encourages young people to prioritise image over achievement. For Abidin (2016a), it is this framing of influencers as inconsequential and unproductive which has allowed them to thrive as an underestimated generative power, which has captured young people’s attention below the radar. MacDonald (2014) and Abidin (2016) perhaps present two sides of the same coin, as both suggest the appeal of YouTubers signifies an extension of consumerist ideology and neoliberal values to almost every sphere of contemporary cultural life (Khamis *et al.* 2017). From a health perspective, this raises important considerations about how the health messages young people encounter are framed, and which organisations are influential in the production of YouTuber health content.

Health Content on YouTube

There are a growing number of research studies looking at health related YouTube content. For the purposes of the research, a PubMed scoping search was undertaken of YouTube and a range of health related search terms, which identified 246 papers on a multitude of topics from smoking (Kim *et al.* 2010; Paek *et al.* 2014), obesity (Yoo and Kim 2012), self-harm (Lewis *et al.* 2011; Lewis *et al.* 2012) and substance use (Manning 2012) to epileptic seizures (Wong *et al.* 2013) and sports-related concussion (D. Williams *et al.* 2014). All of these studies use similar methods by systematically searching YouTube for key terms on a single topic (e.g. smoking) and analysing the results using content analysis (Madathil *et al.* 2015). A systematic review of 33 studies found that these studies generally reviewed more than 100 videos, used multiple reviewers and focused on video characteristics and number of views (Sampson *et al.* 2013).

Studies tend to focus on the accuracy and quality of YouTube health content (Lau *et al.* 2012; Sampson *et al.* 2013; Madathil *et al.* 2015). A scoping study of 456 abstracts (Lau *et al.* 2012) found they generally focused on one of five concerns: 1) targeting harmful health material at consumers (e.g., smoking (Elkin and Thomson 2010; Kim *et al.* 2010), 2) public displays of harmful behaviours (e.g. self-injury (Linkletter *et al.* 2010; Lewis *et al.* 2012), 3) tainted public health messages (e.g. anti-vaccination (Keelan *et al.* 2007), 4) psychological impact of inappropriate or biased content (e.g. pro-anorexia content (Syed-Abdul *et al.* 2013) and, 5) use of social media to contradict or distort policy agendas (e.g. smoking lobby (Freeman and Chapman 2007). The way in which health content quality is assessed across these studies also varies. A systematic review of 13 studies found multiple measures were used to indicate the quality of YouTube videos including content, view count, length, title, shares, viewer rating technical quality, credentials of the creator and health professional opinion (Gabarron *et al.* 2013). The range of objectives and measures used in YouTube health content studies make it challenging to systematically collate the findings.

In general, these studies highlight that videos are widely used by commercial sources (e.g. cosmetic surgeons (Wen *et al.* 2015) and alcohol brands (Winpenny *et al.* 2014)). Several studies have focused on the marketing of products such as alcohol (Winpenny *et al.* 2014),

energy drinks (Buchanan *et al.* 2018) and unhealthy foods (Tan *et al.* 2018). These studies found that, in line with traditional media, these companies often targeted advertising on YouTube content popular with children and young people (Tan *et al.* 2018). Furthermore, they frequently use messages focused on social identity, attractiveness and enhancement of mood or performance (Primack *et al.* 2015; Buchanan *et al.* 2018) and strategies such as comedy or sports collaborations, encouraging interaction (likes, comments etc.) and competitions (Elkin and Thomson 2010; Winpenny *et al.* 2014) designed to appeal to young people. Studies of alcohol brands also suggest young people's access to this content is poorly regulated (Jernigan and Rushman 2014; Winpenny *et al.* 2014) with a study of US alcohol brands finding that two thirds of US alcohol brand YouTube channels could be viewed underage (Barry *et al.* 2015).

The second prevalent finding from these studies was the health information contained within YouTube videos is generally poor quality (D. Williams *et al.* 2014; Abedin *et al.* 2015; Gonzalez-Estrada *et al.* 2015). These videos often counter official public health sources through hedonistic, glamorized, sensationalised, stereotyped and voyeuristic messages (Kim *et al.* 2010; Lewis *et al.* 2012; Manning 2012; Yoo and Kim 2012; Paek *et al.* 2013; Wong *et al.* 2013; Athanasopoulou *et al.* 2015). Unsurprisingly, content produced by health organisations was found to be more accurate than user generated content (Bezner *et al.* 2014; Abidin 2015; Hassona *et al.* 2015). However, there was no correlation between the accuracy of content and popularity, with user-generated content tending to generate more views and comments (Garg *et al.* 2015; Gonzalez-Estrada *et al.* 2015; Hassona *et al.* 2015). User generated content also appeared to be favoured by the YouTube search algorithm (Luo *et al.* 2014; Ho *et al.* 2015). However, some positive impacts of user-generated content have been suggested. For example, studies on epilepsy found this content tended to be more sympathetic and accurate than conventional media (Wong *et al.* 2013) and gave voice to those with epilepsy (Kerson 2012).

In summary, whilst these studies do provide some useful insights into the scope and quality of YouTube health content, they consider YouTube solely as a searchable repository of online information and fail to acknowledge the growing popularity of YouTube as a social network (Miller 2016). By focusing on searching for health-related terms and using a sequential screening approach, existing studies do not capture young people's viewing behaviours on

YouTube, their preferences for certain kinds of content or the role of YouTube algorithms in directing audiences (Sampson *et al.* 2013). In particular, there are no studies which focus on YouTuber produced health content, despite their considerable potential to communicate health information to young people. (Wesch 2008; Scobie 2011)

YouTubers and health

As outlined in the previous section, there are no existing studies that have focused solely on YouTuber produced health-related video content. A small number of qualitative studies have looked at health related online influencers. For example, a qualitative interview study with young female bloggers (n=20, 17-20 years) found that blogs were an important site of self-expression with reduced social cues online lowering bloggers inhibitions and leading to reciprocal self-disclosure. These studies also express concerns about the quality of this health content. Boepple and Thompson (2014) undertook a content analysis of 20 “healthy living” blogs which provided advice on improving physical activity and mental health. Blogs were chosen for the study because they had large number of page views and had won healthy blog awards. The authors recorded a variety of content which was indicative of problematic eating and body image including dieting or practising dietary restraint (n=16), guilt inducing or negative messages about food (n=11) and self-identified eating disorders (n=5). Two case studies use the well-known example of Australian YouTuber Belle Gibson who falsely claimed to have cured cancer using only alternative medicines to highlight the dangers associated with accrediting influencers with false health expertise (Rojek 2017; Lavorgna and Sugiura 2018). Coates *et al* (2019) are the only study that have thus far attempted to demonstrate the impact of YouTuber health content on young people’s health behaviours. In an RCT design, they randomly assigned 176 children (9-11 years) to view mock Instagram profiles of two famous UK YouTubers that featured either unhealthy, healthy or non-food products. The study found that children who viewed influencers showing unhealthy snacks had a significantly increased overall calorie intake and unhealthy snack intake compared with those who viewed non-food products, whilst viewing healthy snacks did not affect intake. Although it is important to note, this study used mock Instagram content in a controlled environment rather than existing YouTube content from these YouTubers.

A small number of studies have evaluated social media influencer content to promote sexual health (Gold *et al.* 2012; McKee *et al.* 2018), mental health (Livingston *et al.* 2013; Livingston *et al.* 2014) and tobacco prevention (Janzen *et al.*, 2015). Livingston *et al.* (2013) evaluated a UK social media video campaign using a prominent male sportsman to raise awareness of mental health among young people. The study reported improved mental health literacy outcomes two months following the intervention (Livingston *et al.* 2013) and small but significant reductions in personal stigma and social distance one year after the intervention (Livingston *et al.* 2014). Janzen *et al.* (2015) used social media influencers in a tobacco prevention campaign for young people. The campaign segmented their young audience into what the authors described as “hipsters” for whom an online contest to promote tobacco-free messages was promoted among local artists, musicians and photographers. The second target audience were described as “alternative teens” and partnerships with popular bands were used to promote tobacco free messages. The authors conclude that social influencers are an effective way to extend the reach of campaign messages for public health interventions with a combined influencer audience of over 6 million people, however the authors do not provide any evidence on the impact of these messages.

Despite the sparse evidence on the effectiveness of YouTuber campaigns, in 2017 Public Health England launched their Rise Above campaign which uses YouTuber videos to communicate health information to young people age 11-16 years and as a resource for schools through the Rise Above for Schools programme. The content covers a range of topics including relationships, peer pressure, alcohol, smoking, exam stress and body image. Videos and interactive lesson plans are built around peer to peer activities. The campaign designers state that by using influential YouTubers, they can get young people and teachers “*talking about the things that matter to them*” and “*build a foundation of healthy behaviours that last into adulthood*” (Public Health England 2017). There is limited evidence available on the campaign design, but the underlying theoretical framework appears to be the Prototype Willingness Model (Gibbons *et al.* 1998) by using YouTubers talking about how they reject risk behaviours to increase the young audience’s desire to avoid risk and build resilience (Bennett 2016; McDonald 2018). The programme was piloted with schools (n=unknown) and

accredited by the PHSE Association's Quality Assurance mark but no other methodological details have been published (Newton 2017). Similarly, no evaluation data from the programme has been published. The Rise Above YouTube channel has been viewed 1.2 million times and views of influencer videos range from 512,000 to 1,900 views (YouTube 2019). However, there is no published evidence to measure how the programme has impacted on young people's resilience or avoidance of risk behaviours.

The desire of young audiences to emulate the health behaviours of aspirational figures frequently features in the wider literature on celebrity health promotion. Many terms are used to describe this parasocial relationship including pseudo-friends (Giles and Maltby 2004), super peers (Brown *et al.* 2005), opinion leaders and role models. Hinnant and Hendrickson (2012) in their analysis of celebrity health stories (cancer and obesity) in US magazines illustrate how celebrities can be adopted as pseudo-friends by young people and prescribe normative acceptable health opinions and behaviours through sharing intimate and ordinary aspects of their health. These celebrity health narratives can serve a number of functions; Beck *et al.* (2014) conducted a 15 year longitudinal analysis of the health narratives of 157 celebrities and suggest they function as education, inspiration and activism. Flynn *et al.* (2015) analysed risk behaviour in episodes (n=299) from 5 popular MTV docu-soaps and found that drinking and casual sexual behaviours were pervasive. They propose that the reality stars in these programmes can act as super-peers for adolescents who can influence their behaviours, particularly when young people have inadequate knowledge and are yet to experience the risk behaviours themselves. The influence of role models or opinion leaders on young people originates from the wider behaviour change literature (Bandura 1995; Rogers 2003) and these concepts have also been applied to the context of celebrity health promotion. Many studies using celebrity role models to influence young people's health have used professional sports stars to impact upon physical activity participation and related behaviours (Martin and Bush 2000; Yancey *et al.* 2011; Inoue *et al.* 2015) and demonstrate increased confidence and self-efficacy among young people (Inoue *et al.* 2015). Wider systematic reviews report that using celebrities in these campaigns can influence the health information individuals retain (Hoffman and Tan 2013) due to factors including their perceived credibility, audience conditioning to react positively to their advice and a desire to acquire celebrities' social capital (Hoffman and Tan 2015).

2.5: Theoretical concepts relevant to the research

The following section discusses key theories and concepts of youth behaviour and wider theories of youth identity that were identified through the literature review as particularly relevant to YouTubers' potential for health promotion.

Behaviour

Despite powerful discourse on the impacts of social media on young people's health behaviours (Buckingham 2008) the evidence from existing studies and interventions remains inconclusive. However, two tenets of contemporary behaviour change theory were commonly referred to across the reviewed studies; namely the role of social media in increasing young people's self-efficacy and the potential for YouTubers to act as role models for young people's health behaviours.

Self-efficacy

Self-efficacy is concerned with "*judgements of how well one can execute courses of action required to deal with prospective situations*" (Bandura, 1982, p.122). Self-efficacy was first termed by Bandura (1977) who proposed that an individual's behaviour is strongly influenced by their confidence in their ability to perform it. These judgements, regardless of how accurate they are, influence individuals' choice of activities, preparation, effort and emotional reactions, with people assuredly undertaking activities they believe they are capable of managing while avoiding those which exceed their perceived coping abilities (Bandura 1982). Self-efficacy was incorporated into the Theory of Planned Behaviour (Ajzen and Fishbein 1980) which placed self-efficacy belief (or perceived behavioural control) within the framework of beliefs, attitudes, and intentions to predict behaviour. The reviewed evidence suggests that increased self-efficacy may result from participation in online health communities (Oh 2012) and from messages communicated by admired role models (Inoue *et al.* 2015). This suggests YouTubers' health content could be promising in increasing young people's self-efficacy.

Role Models

The term role model is used quite casually in both public discourse and community based health improvement (Gauntlett 2008; Armour and Duncombe 2012). It is loosely defined as an inspirational individual or someone who sets an example for behaviour (Gauntlett 2008) and has quite broad parameters with family members, peers, teachers, athletes and celebrities all considered potential health role models (Martin and Bush 2000; Armour and Duncombe 2012). This suggests YouTubers also have the potential to act as role models, an approach which has been taken in PHE's Rise Above PHSE campaign (Public Health England 2017). Role models are believed to be particularly effective in health improvement interventions with children and young people because perceived similarity (Bandura 1995) means young people can identify with them and thus deem their behaviours worthy of imitation (Brown et al. 2003; Armour and Duncombe 2012). Through role models, young people can be introduced to imagined or possible selves (Armour and Duncombe 2012) which is linked to the development of social capital (Rhodes 2004) and the reinforcement of prevailing societal norms (Biskup and Pfister 1999).

However, while role models have been used in community health interventions under many guises (such as health champions, opinion leaders and mentors, (Armour and Duncombe 2012)), how these role models are effective remains under theorised (Gauntlett 2008). Social learning theory (Bandura 1977) is frequently used to describe how individuals can learn both discrete behaviours and complex behavioural patterns by imitation. Learning through role models is an important part of this process as individuals can be guided to ways of behaving without having to test this behaviour themselves in various situations and conditions. However, this theory has been critiqued due to the lack of complexity with which it explains the processes involved (Gauntlett 2008). It does not acknowledge that the process of learning from role models is reciprocal. Young people do not only have their concept of self-influenced by role models but also choose role models who suit them. They are also selective, appropriating certain elements of role models and positioning themselves in relation to negative characteristics (Biskup and Pfister 1999; Armour and Duncombe 2012). This highlights that young people are not as gullible or vulnerable as often suggested, but rather recognise that individuals do not need to be flawless to be a role model (Biskup and Pfister

1999; Lines 2001; Gauntlett 2008).

Wider theory: Identity

Social media has become an integral feature of young people's social lives and have extended the space in which they create, negotiate and perform identities through the display of active social lives and symbolic consumerism (boyd and Ellison 2007; Pempek *et al.* 2009; Lyons *et al.* 2015; Atkinson and Sumnall 2016). In many cultures and groups the reasons for choosing or rejecting certain health behaviours such as foods, smoking, alcohol and drug use are bound up in concerns over identity, image, social status and belonging (Stead *et al.* 2011). For young people in particular, these concerns are of paramount importance as adolescence is a period of uncertainty and transition during which young people move from role confusion to achieve a personal identity. Peer group relations also assume increasing importance in adolescence as young people seek to belong and not stand out from their peer group whilst also striving for their own identity (Stead *et al.* 2011).

An individual's symbolic activity is often expressed through modes of consumption and young people respond in all sorts of reflective and creative ways to the symbolic stimuli around them. In an increasingly individualised world, mass media has become a significant way for young people to interpret and construct their lifestyles (Miles 2000). Since the mid-2000s, it has been impossible to consider young people's identities without considering the way they use social media to experiment with identity and relationships (Livingstone and Sefton-Green 2016). Social media can be a powerful source of dominant corporate ideologies, but young people are also critical and active interpreters who can use social media as a symbolic resource to make sense of their own lives (Buckingham 2008). YouTubers have a potentially important role to play in this symbolic consumption, not only through their endorsement of commercial brands but through their self-branding practices (Khamis *et al.* 2017). YouTubers display their own lifestyles for emulation and so can use their persona to endorse a range of contrasting and competing brands, products and services to their young audience (Abidin 2018).

Social Capital

The concept of young people gaining social capital through health-related activities on social media was frequently discussed in the literature (Best *et al.* 2014; Hoffman and Tan 2015; Atkinson and Sumnall 2016). Bourdieu (1986) presents four types of capital: social, cultural, symbolic and economic, which form the foundations of our social life and dictate our standing. Social capital refers to the sustained relationships between people, institutions or organisations through acknowledged membership within these groups (Bourdieu 1986). A range of social and community contexts shape young people's health behaviours and the ways in which young people relate to these networks have important effects on their health and wellbeing. Social capital has been shown to be a protective factor against poor health outcomes among young people with a large UK survey study (n=6,425) reporting associations between a range of social capital indicators and health-related outcomes (Morgan and Haglund 2009). Social media provides an additional space for young people to acquire and maintain their desired social capital.

Furthermore, for YouTubers social capital is an important concept in understanding their production of health content. Abidin (2018) uses the four types of capital as a framework to explain the different qualities enacted by online influencers such as YouTubers to arouse interest and attention from their young audience. Abidin (2018) labels these qualities as "exclusivity" (economic capital), "exoticism" (cultural capital), "exceptionalism" (symbolic capital) and "everydayness" (social capital). Abidin describes "everydayness" as YouTubers curating the *"usually mundane and ordinary aspects of daily life with such candour and insight, and with much regularity and consistence that a sustained social relationship based on a sense of community and trust is fostered as social capital"* (p33). Sustained and regular contact with their audience allows YouTubers to create networked digital estates where a like-minded audience can congregate. As they build a sense of trust and familiarity with their young audience over time, YouTubers are able to use this trust to promote certain health behaviours, lifestyles, services and products (Abidin, 2018)

Neoliberalism

YouTubers acquiring the social capital to promote certain health messages raises important questions about what these messages contain. The popularity of YouTubers has been linked to a change in the concept of contemporary celebrity through the rise of individualism and consumer capitalism (Turner 2004). Neoliberalism, which is defined as an approach that favours the expansion and intensification of competitive markets and minimization of government intervention (Eagleton-Pierce 2016), is an often-cited critique of contemporary health promotion (Ayo 2012). Neoliberal health promotion places individuals rather than overarching social systems as responsible and accountable for their own health. Under the guise of free choice, individuals are pressured to act according to the social and politically sanctioned norms of what it means to be healthy (Ayo 2012). As the reviewed literature has identified, on YouTube the boundaries between voluntary practices of health promotion, professional and government health promotion and commercial strategies is increasingly blurred (Winpenny *et al.* 2014; Lupton 2015; Tan *et al.* 2018). YouTubers in particular are successful through the neoliberal ideals of self-branding, authenticity and individual endeavour that are pivotal to the attention economy (Gamson 2011; Lovelock 2016; Khamis *et al.* 2017; Ashman *et al.* 2018). As Lupton (2015) argues individuals and organisations who are attempting health promotion via social media are increasingly operating in a commercialised and commodified environment that is manipulated by the “algorithmic authority” (Cheney-Lippold 2011) of social media corporations (Lupton 2015).

2.6: Conclusion

Social media is a contemporary arena in which young people can interact with health risks and opportunities. Social media also increases the multiple sources of health information that young people have access to and presents several advantages including anonymity, convenience, facilitating peer support and connecting to a community with similar health concerns. Young people’s engagement with social media health information is complex and balances concerns about credibility, quality, personal relevance and salience with a desire to manage their self-presentation online. Young people’s interaction with social media for health purposes is dependent on their ability to critically appraise the health information they

encounter. The existing evidence suggests young people's critical appraisal of social media content is more complex than their appraisal of factual sources and includes social media metrics, interaction with and quality control of these sources by others, and is linked to young people's social development. Social media presents a promising venue for health intervention with young people. The existing research from these interventions suggests promising outcomes in knowledge, attitudes, subjective norms and health behaviours but these conclusions are limited by the poor quality of existing studies.

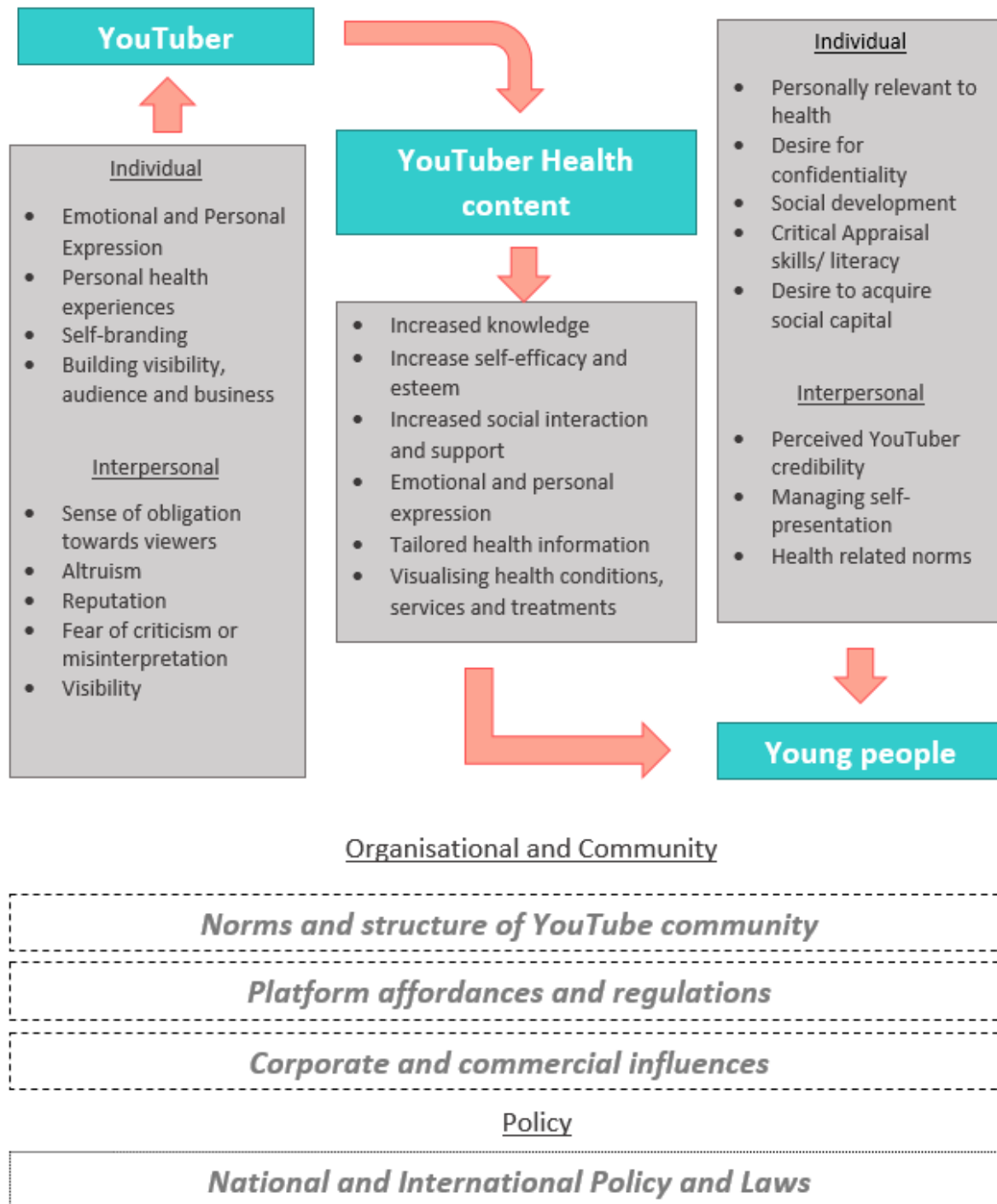
The considerable popularity of YouTuber's among young people suggests they could be an influential source of health information. Through a combination of frequent posting, high visibility and encouraging audience participation they share ordinary aspects of their lives; allowing a sense of community and trust to be fostered among their young audience that can be used to endorse others. However, existing research on health-related content on YouTube suggests the quality is variable and it is dominated by commercial sources. While YouTuber content has been used by Public Health England in a national PHSE campaign (Public Health England 2016), there is currently very little published evidence that has focused on YouTubers as a source of health information. In particular, there is a scarcity of evidence that explores the way in which young people engage with and are influenced by the health behaviours and messages that they encounter within the videos of professional YouTubers. This research aimed to address this gap in several ways. Firstly, it is the first study to gather both quantitative (study 1) and qualitative (study 3) data on young people's (13-18 years) engagement with the health content produced by professional YouTubers. Secondly, it gathered data on the health information contained within YouTubers' videos (study 2); which has not previously been systematically researched. Lastly, it was the first study to explore the role YouTubers themselves believe they play in health promotion through semi-structured interviews (study 4). By bringing together this evidence, it will contribute towards the gaps in the existing literature and thus improve public health professionals' understanding of the conflicting information sources that influence young people's health behaviours. Thus, it will assist policy makers, and young people's practitioners in health and education to consider the feasibility of using YouTubers in the design of health improvement interventions for young people.

2.7: Conceptual Framework

A conceptual framework for the research was created which demonstrates the links between the research problem, literature review and methodology selected for the research (Bloomberg and Volpe 2016). As outlined by Maxwell (2013) the conceptual framework was developed using evidence from the literature review, theoretical concepts and the researcher's previous experiential knowledge. The development of the conceptual framework was an iterative process that was constantly revisited during the research process (Bloomberg and Volpe 2016).

A diagrammatic representation of the conceptual framework is presented in figure 2.2 below. The existing research suggests, as illustrated in the central column, that YouTuber health content can have some positive health outcomes for young people including increased knowledge and ability to visualise health behaviours, conditions, services and treatments and access tailored health information. In addition, YouTuber health information has the potential to increase self-efficacy, esteem, social interaction and support. However, the conceptual framework also recognises that multiple factors influence upon YouTubers' production of health content and the way in which young people engage with this content. These factors have been categorised using the socio-ecological model, that from a health promotion perspective, recognises that human behaviour is determined by intrapersonal, interpersonal, organisational, community and policy factors (McLeroy *et al.* 1988). The socio-ecological model was chosen as it allowed for the complexities of young people's interaction with YouTuber health content and captured their online and offline sociocultural norms.

Figure 2.2: Conceptual Framework



As illustrated in column one, YouTubers creation of content is influenced by their personal health experiences and need for self-expression. A number of factors associated with the attention economy of YouTube could also be influential including self-branding (Gamson 2011; Khamis *et al.* 2017; Ashman *et al.* 2018), maintaining their audience (Abidin, 2018) and

business, and maintaining visibility on YouTube (Chamberlain 2010; Marwick 2015b). They also appear to be influenced by intrapersonal factors including a sense of obligation towards their audience (Senft 2008; Jerslev 2016; Abidin 2018), altruism and enhancement of their reputation (Oh 2012; Yan *et al.* 2016). Their creation of health content may also be limited by a fear of misinterpretation or criticism from their audience and wider society through the traditional media (Powers 2015; Abidin 2018).

A range of individual, intrapersonal and organisational factors were also identified which could impact upon young people's engagement with YouTuber produced health content (column 3). Individual factors were young people's own health experiences and the personal relevance of YouTuber content (Chen and Lee 2014; Correa 2015), their desire for confidentiality (Gulliver *et al.* 2010; Moorhead *et al.* 2013), a desire to acquire social capital (Hoffman and Tan 2015; Abidin 2018) and their social development; with research suggesting engagement with online content changes as young people mature (Livingstone 2014). In particular, young people's existing critical appraisal skills, and wider health and social media literacy skills were shown to be linked with their social development (Jenkins 2006; Drotner and Livingstone 2008; Gulliver *et al.* 2010; Livingstone 2014). Intrapersonal factors included the perceived credibility of the YouTuber and their health content (Gray *et al.* 2005a; Fergie *et al.* 2013; Cocker and Cronin 2017), wider peer and social norms, and young people's need to manage their self-presentation online (Newman *et al.* 2011; Byron *et al.* 2013; Fergie *et al.* 2013)..

Finally, a number of overarching organisational, community and policy factors that influence both YouTubers and young people were identified (illustrated by the bottom rows of the diagram). Organisational and community factors include the norms and structure of the YouTube community (Cocker and Cronin 2017; Abidin 2018), the affordances and regulations of the YouTube platform (Dyer 2017; Abidin 2018; Burgess and Green 2018) and corporate and commercial influences (Lupton 2015; Burgess and Green 2018). YouTuber health content will also be influenced more widely by national and international policy and law. For example, in 2016 the Advertising Standards Agency ruled that online celebrities such as YouTubers are required to clearly disclose sponsorship and paid-for advertising to make this content more easily identifiable for their audience (Advertising Standards Agency 2016). In the UK, there

has also been an increased focus on the wider impacts of social media on young people's health in the policy arena, including: the All Party Parliamentary Group (APPG) on social media and young people's mental health which was established in March 2018, and a select committee report on the impact of social media and screen-use on people's health published in January 2019 (House of Commons Science and Technology Committee 2019).

Chapter 3: Methodology

This chapter outlines the research methodology that underpinned the research, organised into six sections. Sections one and two outline the mixed methods approach and describe how integration was used across all stages of the research. The framework for these sections was Leech's (2010) areas for attention when presenting mixed methods studies: 1) the researcher's philosophy, which in this case was pragmatism; 2) the researcher's definition of mixed methods research; 3) an understanding of how the study fits within mixed methods literature; and 4) a clear statement of where the mixing occurred. Section three provides a rationale for the methods used in each study. The details of data sampling, collection, analysis and limitations are included in the relevant study chapters. Section four describes how these findings were triangulated at the data analysis phase. Finally, the ethical considerations (section 5) and issues of trustworthiness (section 6) associated with the research are reviewed.

3.1: Pragmatic paradigm

Tashakkori and Teddlie (2010) identify paradigm pluralism as a key characteristic of mixed methods research with a range of conceptual orientations existing within the "big tent" of contemporary mixed methods (p7). This mixed methods study takes a pragmatic approach to research design. Pragmatism has become a valued, attractive and well-used stance within mixed methods research (Johnson and Onwuegbuzie 2004; Creswell and Tashakkori 2007; Denscombe 2008; Feltzer 2010; Dures *et al.* 2011; Evans *et al.* 2011; Hall 2012). It argues that theories are 'true' only in terms of how well they work (e.g. their feasibility and acceptability (Mann and Stewart 2000; Dures *et al.* 2011)) based on two central arguments: that truth changes over time as reality changes and that truth changes through space as people's ideas differ (McCaslin 2012). Pragmatism is orientated towards solving practical problems in the societal and historical context of the 'real world' (Evans *et al.* 2011; Hall 2012). Pragmatism has been described as bridging the gap between the purist paradigms (McCaslin 2012) by rejecting the false dichotomy that exists between qualitative and quantitative methods. Pragmatist approaches are well-suited to mixed methods researchers who seek to integrate quantitative and qualitative data collection and analysis under the same framework. By doing

so, the inherent strengths of these techniques are combined to create a better understanding of social phenomena (Onwuegbuzie and Leech 2005).

Pragmatism acknowledges that structures, relationships and events are susceptible to change and uncertainty and that the most useful methods are those which have the potential to answer what researchers wish to know (Feltzer 2010). Creswell outlines (2003) the ways in which pragmatism fits with the mixed methods approach. Researchers are not restricted to a single concept of reality or truth allowing them to draw on both qualitative and quantitative assumptions in their work and choose the methods that best meet their needs. Instead, pragmatists frame their research in terms of what they hope it will achieve, seeking functional knowledge to consider the impact of research on practice. This approach was particularly valuable in the current study, which sought to combine the interdisciplinary methods and theories that are emerging around young people's social media use in order to inform practice in a public health context.

However, commentators caution against a cheap (Denzin 2012) or common sense (Denscombe 2008) interpretation of pragmatism, in which an 'anything goes' (Denscombe 2008) or 'quick fix' mentality replaces transparent and replicable methods and analyses (Creswell and Tashakkori 2007). As Biesta (2010) argues, there is nothing problematic in the notion that the methods selected should be the most appropriate for the research aims, however this becomes more complicated when this everyday interpretation of pragmatism is regarded as a philosophical paradigm. In order to better understand how the ideas of pragmatism are relevant to mixed methods research, we must appreciate that pragmatism is not a philosophical stance but a set of philosophical tools that can be used to address research problems (Biesta 2010).

This is perhaps best achieved by Morgan (2007) who draws upon the anti-dualist stance inherent in pragmatism (Creswell and Tashakkori 2007) to create an approach based on abduction, intersubjectivity and transferability (Morgan 2007; Evans *et al.* 2011). Morgan (2007) proposes that the dichotomies of induction versus deduction and subjectivity versus objectivity are false and instead suggests that the researcher is constantly moving back and forth between these terms of reference during the research process. Similarly, Morgan (2007)

rejects the two extremes of context-specific and generalizable knowledge, instead focusing on how we can make the most appropriate use of findings from one context in other circumstances by moving backwards and forwards between specific results and their general implications. However, this is not to say that the concepts of trustworthiness and validity should not be applied to mixed methods research and this is discussed in section six of this chapter. This pragmatic approach is viewed as particularly valuable for applied health disciplines such as public health where research often aims to: understand complex, real world problems, explore diverse lived experiences in busy, real world settings and tailor recommendations that balance neutrality and advocacy while meeting stakeholder and participant needs (O'Cathain *et al.* 2007; Greene 2008; Dures *et al.* 2011). This is evident in the current study on young people's engagement with health content produced by professional YouTubers where it was necessary to engage with the diverse populations of young people, YouTubers and their gatekeepers, both offline and online, to produce usable public health recommendations in a complex and ever-changing social media landscape.

3.2: Mixed methods methodology

The issue of paradigms in mixed methods research remains the subject of much criticism with some commentators maintaining that it is not possible to mix constructivist and positivist epistemologies (Lincoln and Guba 2000). However, as Morgan (2007) argues, paradigms in mixed methods research do not dictate methods, rather much of the mixing takes place below the paradigm level, "*on the shop floor of research*" (Sandelowski 2000): p246) during the processes of data sampling, collection and analysis (Padgett 2012). Maxwell and Loomis (2003) propose that the research question is a guiding principle in mixed methods research and directly related to the relationship between four components: the research purpose, the guiding theories, methods and validity.

Defining mixed methods research

Defining mixed methods research has been the topic of extensive debate within the methodological literature (Burke Johnson and Onwuegbuzie 2004; Cresswell and Plano Clark 2011; Hall 2012). One of the most commonly used definitions comes from Johnson *et al.* (2007) who combined the common themes from nineteen writers in the field to conclude that:

“Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches...for the broad purposes of breadth and depth of understanding and corroboration” (p123). Key to this definition is “methodological eclecticism” where researchers reject the either-or approach to qualitative or quantitative research and instead select the most appropriate techniques from the full host of methods to investigate the topic of interest (Tashakkori and Teddlie 2010).

Mixed methods research has grown in popularity in applied social sciences because it is not guided by philosophical paradigms but by the issues and conceptual theories relevant to the subject of study (Greene 2008; Greene and Hall 2010; Tashakkori and Teddlie 2010). In the case of exploring YouTuber related health content, this allowed standardised frequencies of young people’s engagement and more individualised narratives of young people and YouTubers’ experiences to be combined to improve understanding of the complex issue under study (Greene and Hall 2010). This represents one of the key advantages of mixed methods research; by combining qualitative and quantitative methods we can gain a richer, more full and complete understanding of the research question, with the results from one approach able to guide and inform the next (Hewson 2006). In this research, quantitative responses from young people on their favourite YouTubers were used to establish the sampling frame for the qualitative studies, thus ensuring the research was guided by young people’s responses. However, it must be acknowledged that there were some practical disadvantages to this mixed methods approach, in particular because it involves lengthy data collection and analysis periods and requires the researcher to have expertise in both qualitative and quantitative data collection methods (Johnson and Onwuegbuzie 2004; Hewson 2006). This can be particularly challenging for post-graduate researchers who are often working largely in isolation with limited time and resources.

Research question

The overarching research question was to examine the role that professional YouTubers play in influencing health behaviours among young people in the UK.

The “*dictatorship of the research question*” (Tashakkori and Teddlie 1998) has long been a defining principle of mixed methods research. The research question shapes all later stages of the research, guiding the choice of methods from sampling through to data analysis and setting the boundaries and direction for the study (Plano Clark and Badiee 2010; Tashakkori and Teddlie 2010). The primary aim, stated above, served as an overarching question for the research and suggested a combination of quantitative and qualitative research methods might be required in order to understand both the scale and complexities of young people’s engagement with YouTuber health content. From this, a review of the literature was conducted (as outlined in chapter 2) which suggested a number of gaps in the research surrounding young people’s engagement with the health content produced by professional YouTubers.

As previously described in chapter 2, the scale of young people’s engagement with professional YouTubers indicates their considerable potential to promote health messages (boyd 2008) and inform the design of YouTube based health interventions. However, whilst viewing and subscription data give an indication of the number of people engaging with professional YouTubers, relatively little is known about the characteristics of this population or the health information they encounter. Existing content analysis studies on the quality and type of YouTube health information available focus on actively searching for health topics (“instrumental use” (Papacharissi and Rubin 2000)), but little is known about the frequency at which young people encounter health information during their everyday viewing. Quantitative research was therefore needed to provide baseline data and increase understanding of young people’s engagement. Furthermore, there has been no qualitative research that has examined the health-related content produced by professional YouTubers or how this information informs young people’s own health behaviours. Lastly, there has been no research to explore how professional YouTubers perceive their own role in health promotion. To reflect these gaps in the literature, the following study objectives were developed:

- 1) To quantify both young people’s engagement with professional YouTubers and the role this plays in sourcing health related information

- 2) To examine the ways in which health information is communicated by professional YouTubers
- 3) To explore the way in which these health messages influence young people's health behaviours (taking into account differences in age, gender and class)
- 4) To explore the role that professional YouTubers themselves believe they play in the communication of health messages
- 5) To consider the potential contribution YouTube can make to the development of health improvement interventions for young people.

In line with the overarching research aim, each of these deficiencies in the literature naturally lent themselves towards either a quantitative (objective 1) or qualitative (objectives 2,3 & 4) mode of enquiry, further highlighting the need for a mixed methods approach (Plano Clark and Badiee 2010).

Design typology

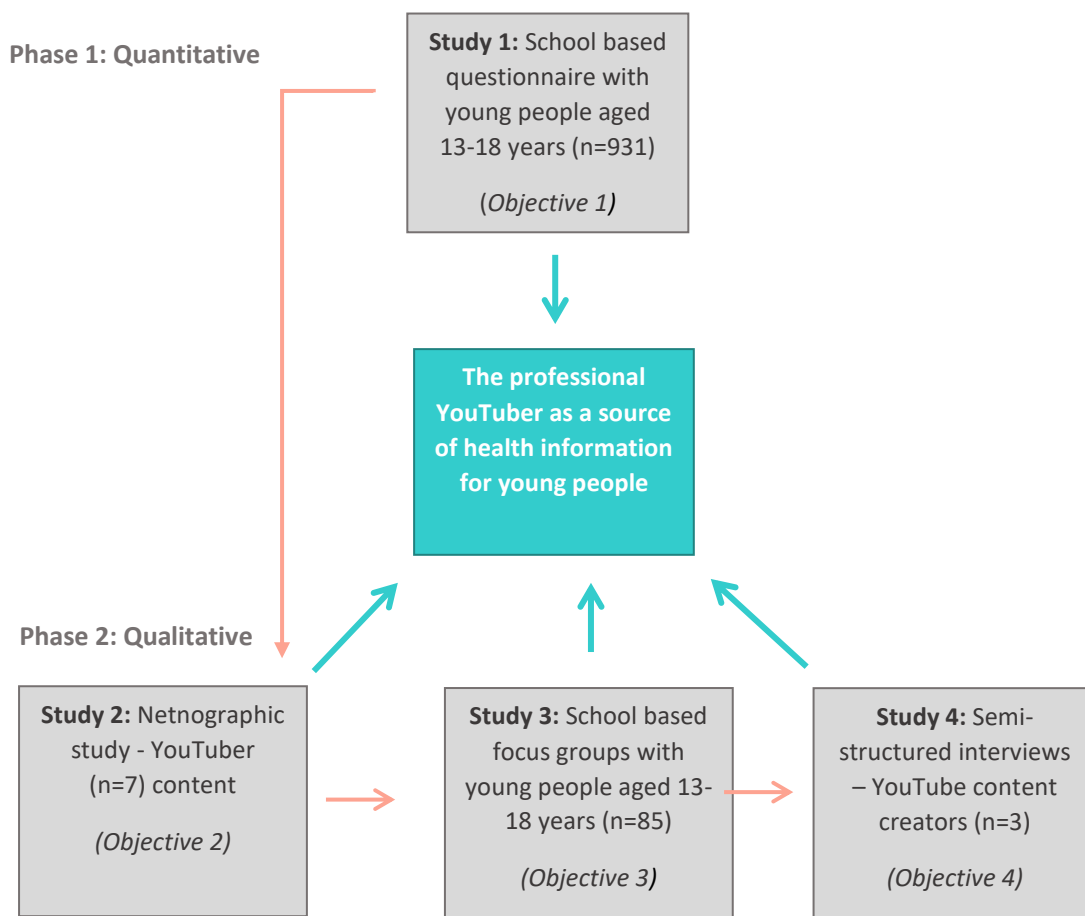
This section describes the overall mixed methods design typology used and highlights the points of integration and triangulation between the four studies that occurred during the sampling, data collection and data analysis stages. Further details and justification for the methods used in each study are covered later in this chapter (section 2.3) while the sampling and data collection methods used are discussed in detail in each respective chapter (chapters 4, 5, 6 and 7).

There have been multiple attempts to develop a design typology for mixed methods research (Greene *et al.* 1989; Morse 1991; Tashakkori and Teddlie 1998; Creswell and Plano Clark 2007; Teddlie and Tashakkori 2009) and these typologies can be useful by providing design options from which researchers can develop their studies (Tashakkori and Teddlie 2010). However, in recent years there has been a move from basic to more complex design typologies (Nastasi *et al.* 2010), recognising that mixed methods research need not be restricted by standard designs but rather can make use of these designs in combination (Gorard 2010). The emphasis in these complex designs is positioning the research on a series of three continua (Johnson

and Gray 2010; Niglas 2010): 1) the level of mixing and stage at which it occurs, 2) the time orientation (for example, sequential or concurrent) and 3) the emphasis or weighting given to each phase (dominant versus equal), (Teddlie and Tashakkori 2009; Leech 2010; Nastasi *et al.* 2010).

An integrated four stage sequential mixed methods design was used to address the research aim by combining a quantitative school based questionnaire (study 1) with three qualitative studies (studies 2, 3 & 4). Study 2 was a netnographic study which examined the health-related videos and associated comments of seven UK YouTubers, study 3 used focus groups with 13-18 year olds to further explore their engagement with this health related content and study 4 used semi-structured interviews with professional YouTubers to examine their perceived role in health promotion (figure 3.1). All four studies were given equal emphasis.

Figure 3.1: Research Design



Integration

Integration is a key characteristic of mixed methods research which occurs throughout the different stages of the research study (Creswell and Plano Clark 2007; Tashakkori and Teddlie 2010). As Bazeley (2010): p3) states, through integration the various elements of the research “...become interdependent in reaching a common theoretical or research goal, thereby producing findings that are greater than the sum of the parts.” Integration of qualitative and quantitative aspects of the study took place at the data sampling and data collection phases as described below.

Study 1 not only addressed objective 1, by providing preliminary results on young people’s YouTube use and health seeking behaviour, but also provided a sampling frame for the three subsequent qualitative studies. Firstly, participants were asked to identify which UK YouTubers they watched (from a list of the top 50 most subscribed in the UK and through a free-text response). These responses were used to produce a sampling frame of the most popular YouTubers to include in the netnographic study (study 2). This information, along with YouTubers that young people could recall talking about health-related topics (free-text response) was combined to produce a list of YouTubers who were invited to participate in the semi-structured interviews (study 4). Finally, the schools who self-selected to participate in study 1 were also invited to participate in the focus group study (study 3). However, as the data collection for study 1 and study 3 took place across two academic years, this was not considered a sub-sample design (Tashakkori and Teddlie 2010), and while it is possible that some young people took part in both studies, the anonymous nature of the questionnaire meant that there was no link between responses.

The second, qualitative phase of the research involved three sequential studies that were each informed by the findings of the previous study. Content from the netnographic study (study 2) was used to prompt discussion in the focus group study (study 3). Firstly, photographs of five of the YouTubers included in the study were used to open up discussion about the kind of health-related content they produced. Secondly, excerpts from four videos which were analysed in the netnographic study were shown at the focus groups. This facilitated a discussion framed around the theory of planned behaviour and health

communication theory to better understand the influence this kind of content had on young people's own health behaviours. The discussion of these videos also served as a member check/reflection to confirm the validity of the researcher's interpretation of this content. The findings from both study 2 and study 3 informed the semi-structured interview questions with professional YouTubers (study 4).

Responsive research design

A key characteristic of mixed methods studies is their reflexive and responsive nature to the many opportunities and pitfalls which will present themselves throughout the research process (Gorard 2010). The advantage of mixed methods, particularly in sequential designs, is that the researcher can be responsive to unexpected results (Plano Clark and Badiee 2010) and is not confined to predetermined methods (Christ 2010).

There were two notable changes to the research design that occurred during the course of the research. The first was that the questionnaire (study 1) was initially meant to have two parallel arms of data collection: the school-based questionnaire that is presented in figure 3.1, and a second online version of the questionnaire that recruited young people directly from the YouTuber fan community ("fandom"⁶) through social media (for example Instagram, Tumblr and Twitter). The data collected in these two arms was intended to be compared to establish if there were any differences in health information seeking and recall between the general population (school-based) and those who were particularly engaged in these online communities (fandoms). However, recruitment to this part of the study proved challenging and the sample size achieved across the six month data collection period was too small to allow for a meaningful comparison (67 responses versus 931 responses to the school-based survey). This process has been captured in a reflexive stop off below (section 2.3). Secondly, the focus group study (study 3) was initially intended to be a smaller member check element embedded into study 2. However, during the data collection process it became clear that wider themes were emerging from this study which provided useful insights into the influence

⁶ Fandom is defined by the OED (2019) as "The fans of a particular person, team, fictional series, etc. regarded collectively as a community or subculture"

that professional YouTubers' health content has on young people's health behaviours and so the scope was increased to create an additional, sequential qualitative study.

2.3: Research Studies

The research combined four different data collection methods; questionnaires (study 1) and focus groups (study 3) with 13-18 year olds, a netnographic study of the video content produced by seven YouTubers (study 2) and semi-structured interviews with YouTubers (study 4) to gain a more complete and rich understanding of the role professional YouTubers play in young people's health behaviours. Integrating methods in this way presents a number of benefits including increased depth, breadth and rigor (Denzin and Lincoln 2011; Creswell 2013; Flick 2017). The objective and a justification for the choice of methods in each study is provided below. However, the sampling criteria, data collection procedures and data analysis used in each study is described in each respective chapter (chapters 4, 5, 6 &7).

Rationale for school based questionnaire (study 1)

Questionnaires are advantageous because they are generally easy to administer and manage and relatively unobtrusive particularly in the school environment (Fink 2013). The questionnaire had a distinct place in the research design. It provided a sampling frame for the later qualitative studies and also provided quantitative data on young people's engagement with professional YouTubers and their recall of health content from these sources. Demographic questions also allowed the observation of any differences in these behaviours according to gender, age, ethnicity, deprivation and self-reported health and wellbeing.

The questionnaire was administered in six secondary schools and further education colleges in a single county in the North West of England. While questionnaires are a frequently used data collection method in the school setting, the researcher needs to be mindful of several issues that are particular to this environment. Challenges include finding a time in the school schedule and the social norms of the classroom including how best to develop rapport with students, encouraging students to respond independently to maintain confidentiality and reducing the influence of those around them (Strange *et al.* 2003).

Reflexive Stop Off: online survey

When I initially began planning the questionnaire for study 1, it seemed only natural that the respondents should be recruited online from the YouTubers' own social media presence and the fan communities their audience had developed. This population was engaged with UK YouTubers and would have the best knowledge of their content. It would also allow for some meaningful comparisons to be made between those engaged in these fan communities and the more general population recruited from schools.

The online recruitment presented two main challenges. Firstly, recruiting young people under 16 years presented an ethical dilemma: how could I seek parental consent from young people recruited online, where there is no pre-existing link between myself and the young people's parents or guardians.

I also, perhaps quite naively, assumed that because each YouTubers audience was over 1 million, this would allow me to recruit quickly and achieve a large sample size. I did not predict how challenging this recruitment would be in reality. Requests to share the survey were sent via email to the top 50 YouTubers in the UK (based on number of subscribers) with reminder emails sent after two and four weeks. Popular hashtags (n=141) relating to the top 50 YouTubers and to YouTubers in general (such as #vloggers #beautybloggers #gamers) were used to promote the survey on Twitter, Instagram and Tumblr. Posts were scheduled for outside of school hours (evenings, weekends) and to align with peak traffic times on each social media platform. In total 264 emails and 363 social media posts were made across the four-month recruitment period.

I had mixed success promoting the survey on social media. On Twitter, the survey was only retweeted 41 times whereas on Instagram posts about the study attracted 572 likes over the four month data collection period. Despite this apparent interest, in total the survey was only clicked on 257 times with just 67 young people completing it. This highlights the dangers of mistaking social metrics online such as likes, views etc. with building rapport. While online research does present some positive impacts for participants such as greater anonymity, privacy to complete the survey and a familiar research setting (social media in this case);

online recruitment also offers less opportunity to develop “insider” status or have pre-existing contact with participants which in turn influences the extent to which the participants view themselves as similar to the researcher (Mann and Stewart 2000; Morgan and Guevara 2008).

After in depth discussion with my supervisory team, it was eventually decided that the sample from the online survey was too small to be compared with the school based survey (931 vs 67 responses) and so these data have been excluded from the results. However, the data from this survey was used in a publication reflecting on the ethical procedures of seeking parental consent (Harris and Porcellato 2018). Thus, this element of the research contributed to the literature on the ethical challenges of completing online research with young people under 16 years.

Rationale for netnographic study (study 2)

There are numerous definitions describing the study of online communities including digital ethnography (Hughes 2012), virtual ethnography, online ethnography (Beaulieu 2004) and netnography (Kozinets 2002). Study 2 is described as a netnographic study, because the methods used align most closely with the five steps outlined by Kozinets (2015). However, the term netnography has been deliberately avoided when describing the study, as there are a number of ways in which the research diverged from Kozinets definition of the term, particularly due to the covert nature of the data collection. These differences are discussed in greater detail below.

Netnography was originally developed as a market research method and is the adaption of ethnography to online communities (Kozinets 1998; Kozinets 2002). However, there is now growing recognition of the wider potential of netnography, not merely to understand consumer behaviour online but also to study the range of phenomena of interest to the social sciences including social interaction, identity and discourse (Bertilsson 2014). Some of the earlier health related works which recognised this potential include cosmetic surgery (Langer and Beckman 2005) and children’s communication of their illnesses (Eysenbach and Till 2001). Bertilsson (2014), in his work with Swedish teen communities, proposed the term critical

netnography which recognises the inherent hierarchies of power embedded within online communications. He highlights the value of netnography for exploring young people's experiences; by exploring the ways in which teens seek knowledge, confirmation and approval online we can increase our understanding of the way in which they seek identity, conform to social norms and express their individuality (Bertlison 2014).

Whilst netnography retains the flexibility and adaptability of conventional ethnography it is adapted to reflect the more rigorous guidelines which exist in the online environment (Kozinets 2002). It originally emerged as a method to be practised in online forum and chat room environments, with Kozinets own work originally taking place on Star Trek and X-Files fan communities in the mid-1990s. It has since grown to reflect the spectrum of online communities including blogging, video sharing and social media engagement (Bowler 2010). In his most recent edition, Kozinets (2015) cautions against applying netnographic principles to a broad social network like YouTube. He claims that a single post on YouTube does not automatically align that individual with the common culture and identity of YouTube as a whole, and to make such assumptions over-reaches the limits of netnography. However, as the case of professional YouTubers and their audiences illustrates, this perspective fails to acknowledge that communities and shared cultures can exist *within* the space of YouTube (Wesch 2008). As Snelson (2014) highlights, researchers wishing to study these YouTube communities can find themselves without clear methodological guidance and are often left to adapt the principles of netnographic research to the context of their own study.

In line with more traditional ethnography, Kozinets (2015) identifies five steps to netnographic inquiry: *entrée*, data collection and analysis, providing trustworthy interpretation, research ethics and member checks. The principles guiding each of these steps and any points of divergence in the current study are described below. The practical details of the data collection process are described in full in chapter four along with the findings from this study.

- 1) *Entrée*:** is the process by which the researcher identifies the online groups of interest and learns as much as possible about the groups they wish to understand. Kozinets (2002) specifies that the chosen online communities should be those which are most

relevant and focused towards the research topic, have high traffic with large numbers of discrete posters and provide more descriptively rich data with more between member interactions.

This is the first point where the methods used in this study differed slightly from those prescribed by Kozinets (2015). While the researcher did take time to familiarise themselves with each of the YouTubers and their audience before data collection began (described in chapter 5), the choice of channels was guided not only by the characteristics described above but also by the most popular YouTubers identified by participants in study 1. Allowing the sampling frame to be guided by young people's responses was considered important because when researching young people's social media use, it can be all too easy to let the researchers own priorities objectify young people's lives (Heath *et al.* 2009). As Stephen and Squires (2003) argue, when we are trying to research young people's experiences, the most straightforward course of action is to "*simply listen to what young people themselves have to say when making sense of their own lives*" (p161).

- 2) Data collection and analysis:** as with ethnography, data collection must be guided by saturation. Coding should take into account the subtexts, pretexts, conditions, contingencies and personal emotions which occurred during the research. In fact, Kozinets (2015) argues that: "*perhaps even more than with ethnography, some of the most useful interpretations of "netnographic" data take advantage of its contextual richness and come as a result of penetrating metaphoric and symbolic interpretation, rather than meticulous classification*" (p.5-6). Netnography also differs from ethnography because data is usually plentiful and easy to obtain and so the researcher must let the research question and available resources guide which data to pursue. During the analysis of data, the researcher may also need to make some decisions to reduce the volume of data. In this study, this involved a coding stage conducted before analysis began to identify which data was on-topic/ off topic and informational/conversational so that analysis focused on the most relevant and informative data. Details of how on-topic/off-topic data was defined is included in

chapter 5.

- 3) Providing trustworthy interpretation:** describes the process of contextualising online communication. This is of particular importance in dynamic online environments such as YouTube where participants may be presenting a carefully cultivated image (Khamis *et al.* 2017; Abidin 2018). Kozinets (2015) draws on the earlier works of Mead (1938) to recognise that it is the behaviour or act (in this case the online post) that is the unit of analysis rather than the person. In the “language game” (Wittgenstein 1953) of online communication, every aspect from the type of post, method of communication to the content, is relevant data which is capable of being trustworthy.

- 4) Ethics:** Kozinets (2015) advocates the careful consideration of research ethics and how they apply to netnography. Given the emphasis Kozinets (2015) places on research ethics, it is surprising that this is the fourth step in his method, particularly as in most research studies ethics will rank first both in terms of importance and position in the research process. In this study ethical approval was sought before any online data collection began from LJMU research ethics committee. In accordance with Kozinets’ recommendations, careful consideration was given to a number of areas including community members’ perceptions of what is public and private, seeking consent, the use of verbatim quotes and protecting participants from harm.

It is important to highlight at this stage that the study was a covert, observational study. As Kozinets (2002) observes, netnography’s *‘uniquely unobtrusive nature... is the source of much of its attractiveness and its contentiousness’* (p65) and he generally advocates for a participatory approach in which the researcher avoids “lurking”, in favour of engagement and immersion into the online community in question. Careful consideration was given to the level of participation in this study, and the reasons for remaining largely covert are outlined in greater detail in the ethical considerations section below.

5) Member checks: involve presenting some or all of the research findings for comment to the communities who have been studied (Lincoln and Guba 1985). This allows the research to gain more in-depth insight into the community being researched as well as ameliorating some of the ethical concerns which may arise from covert methods of data collection.

In this study, the decision was made to member check the data offline rather than returning to the online community as Kozinets suggests. The reasons for this decision were largely practical. While YouTubers' audiences do have large numbers of "devotees" and "insiders" who maintain active involvement and engagement in the fan community, their comment posting activity tends to move from video to video as the YouTuber uploads new content. This proves challenging for online researchers as, unlike in environments such as forums or Facebook groups, there is no single, central location to engage with community members. Some fan community activity does take place off YouTube, on sites such as Tumblr, Instagram and Twitter but, as discussed in relation to study 1; attempts to engage with the community through hashtags on these platforms had been largely unsuccessful. It was therefore decided that member checks would happen in the form of school-based focus groups, where the YouTubers and videos from the netnography were used to prompt discussion. The findings from the school-based survey (study 1) found a high level of engagement with YouTubers in participating schools, with 80% of respondents watching at least one UK YouTuber suggesting they were an appropriate setting for member checking to take place. Young people who self-identified as particularly engaged in YouTuber communities were targeted for the focus groups and teachers assisted the researcher in the selection of the most appropriate participants which will be discussed in greater detail in chapter 4.

Rationale for focus groups (study 3)

Focus groups are an increasingly popular method of data collection in health and the social sciences (Gibson 2007; Kroll *et al.* 2007; Liamputtong 2011). Focus groups sit within the range of qualitative interview techniques which are grounded in interpretivist epistemology by giving priority to seeing the world through participants own eyes and allowing them to use

their own words to tell their stories on their own terms (Heath *et al.* 2009). The main methodological argument for their use is their collective nature (Kamberelis and Dimitriadis 2008; Bagnoli and Clark 2010); focus groups allow for a range of opinions, attitudes and perceptions to be understood (Gibson 2007; Hennick 2007). Focus groups do not aim to reach consensus (Morgan *et al.* 2002), rather they appreciate collective consciousness (Gibson 2007). By creating “data from multiple voices” (Madriz 2003) they can often reveal understanding which would have remained hidden in individual interview methods (Liamputtong 2011). Practically, focus groups are also a relatively quick and cost-effective way to collect complex data from groups of people who have a common characteristic which is of relevance to the research question (Heath *et al.* 2009; Liamputtong 2011).

Seven focus groups were conducted with young people aged 13-18 years recruited from two schools and one further education college. Focus groups are a particularly valuable method for capturing the views of young people because they redress the power of the research and recognise young people as the experts on the topic of discussion (Eder and Fingerson 2001; Gibson 2007; Heath *et al.* 2009; Bagnoli and Clark 2010). Focus groups have been described as a particularly natural way of exploring young people’s views because they “grow directly out of peer culture” (Eder and Fingerson 2001): p35) allowing greater understanding of the ways in which young people acquire social knowledge and create shared meaning and understanding (Heath *et al.* 2009). Focus groups, therefore, allow for the generation of more meaningful data by allowing young people to develop their own language framework and discuss the issues that are of interest and concern to them (Bagnoli and Clark 2010). All of these aspects made focus groups a particularly valuable method for exploring the role of YouTubers in young people’s health behaviours. YouTubers as an online phenomenon have come directly from youth culture, placing young people as the experts in revealing greater understanding of their influence.

However, the limitations of focus groups with young people must also be recognised. Firstly, group discussions create the potential for certain individuals to dominate the discussion and set the context for disclosure and social conformity (Hollander 2004; Hopkins 2007). Focus group research with young people frequently tries to bring together groups who already know each other to allow ease of interaction and create a less threatening environment (Heath *et*

al. 2009). However, in some contexts, young people may be more reluctant to talk about their experiences with people who know them, and researchers must be aware that groups can reveal as much about the role of peer pressure and dominant individuals in shaping shared meanings as they do about the shared understandings themselves (Heath et al, 2012). Secondly, as Gisbon (2012) argues, methods for adults cannot simply be used in the same way with young people but must consider a range of factors including the group composition in relation to gender and age, location and scheduling (particularly in the school setting), and the role of the right environment and the moderator for establishing trust and putting young people at ease. Each of these factors was given careful consideration in the focus group design and are discussed in greater detail in chapter 5.

Rationale for semi-structured interviews (study 4)

Semi structured Skype interviews were completed with three UK YouTubers. Conducting the interviews online presented numerous benefits including mitigating the geographical distance between the researcher and the participating YouTubers and ultimately allowing the researcher access to a group who would be otherwise hard to reach. Krotoski (2010) claims we are in the “golden age of online research” (p2) with internet mediated research moving away from being viewed as novel and innovative to being recognised as a routine method (O'Connor and Madge 2017). Studies making use of techniques such as online surveys and asynchronous (non-real time) email interviews are now common place, however, there is comparatively less attention given to synchronous online interviews (O'Connor and Madge 2017) through instant messaging (Hinchcliffe and Gavin 2009) and video technologies such as Skype (Deakin and Wakefield 2013).

In contrast to asynchronous interviews, synchronous online interviews more closely resemble face-to-face interviews, allowing for high levels of participant involvement to take place in real time (James and Busher 2014). Wilkerson et al (2014) highlight three broad areas of consideration for synchronous interviews: administrative considerations such as the technical skills and software to complete the interviews, ensuring the population under study have the access and digital literacy to participate and that the data collection process can maintain confidentiality and build rapport in a manner which is comparable to offline methods. In light

of these considerations, Skype interviews were considered a viable way in which to conduct interviews with YouTubers. Both the researcher and the participants made regular use of the software, the participating YouTubers already had Skype accounts for business use which reduced the need to share personal contact details and the participants' regular use of online video technologies meant they were at ease using this mode of communication. As Salmons (2015) argues, when research is concerned with online mediated behaviours and practices, online interview methods are particularly valuable because they are "researching in the location of interest" (Gaiser 1997): p136).

As Hine (2005) claims, it is no longer the case that the face-to-face interview is a gold standard against which all other interview techniques are judged, and online interviews are now increasingly being viewed as a valued and legitimate research method (O'Connor and Madge 2017). However, there remains a tendency to present online methods in terms of what they lack when compared to offline methods (Deakin and Wakefield 2013), when Skype interviews actually present several distinct advantages. Practically, Skype interviews allow greater flexibility in organising a time for the interview with reduced health and safety and cost concerns and the relatively common use of Skype software means technical difficulties are usually quite rare (O'Connor and Madge 2017). Ethically, Skype interviews also present a number of advantages, there is no need to collect personal information on participants such as location or telephone number, participants have greater control over their level of anonymity through the choice of either audio or video calls and participants have greater opportunity to withdraw through the simple click of a button (Deakin and Wakefield 2013; O'Connor and Madge 2017). However, there do remain challenges in terms of recruitment, building rapport and interaction (O'Connor and Madge 2017). While the internet provides access to the narrow groups of interest to the research, negotiating access to them through gatekeepers, site moderators and social media can be challenging (Germain *et al.* 2017). In this study there were also limited opportunities to develop early rapport with participants as communication prior to the interview largely took place via email and instant messenger (O'Connor and Madge 2017).

2.4: Data Analysis and triangulation

As Onwuegbuzie and Combs (2010) state, analysing data is one of the most challenging steps in mixed methods research. Mixed methods analysis involves the convergence of results and has, in part, developed from the earlier triangulation literature (Teddlie and Tashakkori 2010). However, there remains some confusion around the term within the mixed methods community (Morgan 2013). “Triangulation” is used to describe the process of corroborating two sets of findings but can also be used to describe the *process* of using different methods within a single study (O’Cathain 2010). Indeed, Flick (2017) actually proposes four types of triangulation: investigator, theoretical, methodological and data. According to Morgan (2013), the cause of much of this confusion is because researchers are attempting to expand upon triangulation literature which predates the use of “mixed methods” as a broader term to describe the use of methods in combination (Greene *et al.* 1989). He argues that triangulation within mixed methods research should return to earlier definitions and focus on the comparison and convergence of the results from different methods (Morgan 2013). For this reason, the bringing together of methods in this research has been described as integration while the bringing together of the research data is described as triangulation.

Triangulation in early writings was described as a process of validation; to corroborate and confirm the results of one study through a second methodological approach (Denzin 1978). The process of triangulation then matured to recognise that converging and validating findings from one or more sources across qualitative and quantitative perspectives is necessary to produce an increased and more meaningful understanding of the subject under study (Denzin 1986; Tashakkori and Teddlie 1998; Hewson 2006). There has also been growing recognition that mixed methods analysis should not only focus on convergence but also areas of divergence. By identifying dissimilarities, we can highlight previously unexplored aspects of the complex phenomenon under study (Teddlie and Tashakkori 2010; Flick 2017).

The individual data analysis methods used are described in each respective chapter (chapters 4, 5, 6 &7). In brief, the results are presented as: a statistical analysis of a questionnaire on young people’s engagement with health information on YouTube (study 1), a theoretically

driven thematic analysis of YouTuber produced health content (drawing on netnographic principles, study 2), a data driven thematic analysis of focus groups with young people discussing YouTubers and health content (study 3) and semi structured interviews with professional YouTubers (study 4). From a mixed methods perspective, the challenge was to then triangulate the data from these four studies so that it produced a deeper understanding of the role of professional YouTubers in young people's health behaviours. Morgan (1998) describes this as the third effort because this triangulation occurs after the individual analysis of the quantitative and qualitative components.

Despite triangulation being widely used within the field of public health, there remains very little procedural information available on triangulation as a process. Most studies appear to take an intuitive approach to triangulation with a scarcity of methodological frameworks and systematic accounts of the process (Farmer *et al.* 2006). As this study was complex, combining the results from four studies and perspectives from both young people and YouTubers, a systematic procedure for triangulation was particularly important. Flick (2017) suggests systematic triangulation is particularly important for research that captures a range of perspectives to ensure that this diversity is taken seriously. A number of triangulation procedures were considered including "following a thread" (Moran-Ellis *et al.* 2006), the weaving approach (Fetters *et al.* 2013), the mixed methods matrix (Wendler 2001) and the triangulation protocol (Farmer *et al.* 2006). The triangulation protocol (Farmer *et al.*, 2006) was chosen for two reasons: firstly, it was the only method which outlined a clear step-by-step process which was felt to be beneficial in bringing together the multiple methods and perspectives involved in the study. Secondly, and related to this point, the triangulation protocol was developed by researchers from the fields of public health and health promotion and so is suited to achieving a multi-dimensional understanding of complex health issues.

Farmer *et al.* (2006) outline six steps for triangulation which are summarised below. The findings from the triangulation process are presented in chapter 8.

Step 1 – Sorting: themes from the analysis are reviewed to create a unified list of themes that is presented in a coding matrix. This included the quantitative analysis, where the

findings were collated into a number of key statements based on the statistical findings.

Step 2 – Convergence coding: data from across the study data sets are compared. The prominence of each theme (number of times it is mentioned) and specific examples are provided to support each theme. A convergence coding scheme is applied to identify where there is agreement, partial agreement, silence and dissonance of themes across the studies.

Step 3 – Convergence assessment: agreement, partial agreement and dissonance is reported between the datasets.

Step 4 – Completeness comparison: by comparing the results from each study for similar and unique contributions to the research question, a summary of the unified findings is presented. In this way, each dataset not only provides part of the story but together contribute a higher level of analysis and broader understanding of the research question.

The final two steps of Farmer et al's (2006) protocol are researcher comparison (step 5) where a level of agreement is established between multiple researchers, and feedback (step 6) where the triangulated results are discussed with the research team and any significant disagreement in interpretation are incorporated into the data. As the data collection and analysis for this study was completed by one researcher, step five was not included in the triangulation procedure. However, the findings were discussed with the researcher's Director of Studies regularly throughout the analysis process and all three members of the supervisory team provided feedback on the results of the triangulation.

2.5: Ethical Considerations

Ethical approval was granted for study 1 (16/PBH/009, 07/11/2016) and studies 2, 3 and 4 (17/PBH/017, 24/05/17) by Liverpool John Moores University Research Ethics Committee. This section will consider and provide justification for the overarching ethical decisions made in relation to the research design while the practical processes undertaken to ensure ethical

practice in each study are described in the methodology section of each respective chapter (chapter 4,5,6 & 7).

In addition to the ethical considerations pertinent to all research with human subjects, two aspects of this research required particular and careful consideration. Firstly, two of the research studies (study 1 and 3) involved engagement with young people aged between 13-18 years. Secondly two of the research studies (study 2 and 4) involved the recruitment and collection of data online and the ethics of online research has received increased attention in recent years (Markham and Buchanan 2012; British Psychological Society (BPS) 2013). Each of these topics are considered in greater detail below.

Ethical considerations when researching with young people

As with all research, the NSPCC (2012) highlights five guiding principles for research with children and young people: that participation is voluntary and based on informed consent, that participation is enabled with systematic exclusion of particular groups avoided, social harm is avoided, personal information and identity is not disclosed and that ethical conduct is upheld. Specific to young people, research must be sensitive to giving voice and enhancing young people's agency and procedures adjusted to reflect the topic and its participants (Heath *et al.* 2009; Barbovschi *et al.* 2013).

Participant information

Ensuring that children and young people fully understand the purpose of the study and research process is vital (Barbovschi *et al.*, 2013; NSPCC, 2012). The mode in which participant information was provided to participants varied according to each study. In the focus group study (study 3), participants were provided with a written participant information sheet prior to the discussion. The researcher took time to talk through the information sheet at the start of the focus group and the participants were given the opportunity to ask any questions. In the paper-based version of the questionnaire (study 1), a simplified and illustrated version of the information sheet was included on the front page of each questionnaire booklet. This was necessary because the questionnaire needed to be suitable for a range of ages (13-18 years)

and in schools where questionnaires were administered by teachers, the researcher did not have the opportunity to confirm young people's understanding and answer any questions.

In the online version of the questionnaire, a two-minute animated video⁷ was used to communicate the participant information. The British Psychological Society (2013) caution against overly complicated information sheets in online research where they can be skimmed or not read by participants and the researcher has no guarantee that the information is understood. Buchanan and Zimmer (2012) suggest a short informative video is a useful method to overcome this.

Seeking consent

Opt-out (or passive) parental consent was used for all research participants aged under 16 years in both the questionnaire and focus group studies. Opt out parental consent is a common method in school-based research where teachers often give consent *in loco parentis* (Bagnall 1998; Tigges 2003; Farmer and Porcellato 2016). Past evidence suggests that opt-in parental consent can produce a smaller and more skewed sample than opt-out consent (Crow *et al.* 2006; Hewison and Haines 2006). This was important in both the questionnaire (study 1) and focus group (study 3) study. In study 1, the questionnaire aimed to observe variation across a range of demographic factors such as gender, age, ethnicity, and socioeconomic deprivation and so it was necessary to obtain a sample that was representative and sufficient in size. The focus groups (study 3) were stratified by age and gender to allow comparisons to be drawn between the collective views of different groups of young people (Heath *et al.* 2009). Barbovschi *et al.* (2013) highlight the importance of balancing respect for young people's autonomy as social actors and respect for parents' roles as gatekeepers concerned for their children's wellbeing. Moreover, in the school environment care must be taken to address the asymmetrical power relations and structured rule systems that may create feelings of implicit obligation to participate (Barbovschi *et al.* 2013). For this reason, opt-out parental consent was combined with assent from young people aged 13-15 years to ensure that young people themselves had the opportunity to opt-in to the research (Valentine 2015).

⁷ Video available at: <https://www.youtube.com/watch?v=9Xrwtji4ITk&t=2s>

For each of the studies, gatekeeper consent was sought in loco parentis from the head teacher or a delegated staff member at each school prior to the research commencing. Parents/ carers of young people aged 13-15 years were sent an opt-out letter through the normal school communication channels which fully explained the study. The letter described the nature of the research, provided email and telephone contact details for the researcher and gave them the opportunity to opt their child out of the focus group. Opt-out forms were returned to the school and it was the responsibility of each school to ensure that students who had been opted out of the study did not complete the questionnaire or take part in the focus group. For young people aged 13-15 years, parental opt-out consent was combined with either written (focus groups) or implied (questionnaire) assent. Young people aged 16 years and over consented themselves to participate in the same manner. At schools where young people completed the online rather than paper-based version of the questionnaire, young people were required to tick a box to confirm they had viewed the participant information video before proceeding to the survey. The British Psychological Society guidance (2013) recommends the use of a tick box as a more implicit form of consent because in online surveys the researcher cannot otherwise guarantee the participant information has been understood.

Ethical considerations in online research

There has been increased attention given to the ethics of online research in recent years with several specific guidance documents being published (Markham and Buchanan 2012; British Psychological Society (BPS) 2013; British Sociological Association 2017). However, there remains considerable disagreement on best practice across this guidance due to the complexity of online research (Germain *et al.* 2017). There is simply too much diversity across online cultures and methods for a single set of guidance to cover all ethical situations (Convery and Cox 2012). The Association of Internet Researchers (AoIR) highlight in their guidance that the best approach in internet mediated research is often a practical judgement made attentive to the research context rather than a one size fits all approach (Markham and Buchanan 2012). However, there remain four issues which are regularly discussed and debated in the online methodological literature, namely perceptions of public and private

space, seeking consent, protecting participants from harm and whether to use verbatim quotes when collecting data online (Kozinets 2015; Germain *et al.* 2017).

Public or private space and seeking consent

As previously discussed in section 2.3, a covert approach was taken to the collection of data from YouTubers in the netnographic study (study 2). While this type of unobtrusive data collection can be one of the more attractive aspects of netnographic methods, it is also one of the most contentious (Kozinets, 2002:65) as it makes assumptions about online users' perceptions of public and private space. The British Psychological Society (2010) guidelines describe a public space as one where an individual "would expect to be observed by strangers" (p25). Online, the concept of public and private is not a binary one, online communication can be simultaneously public (e.g. on an open discussion group) but also in private (e.g. from the home) and it is not always easy to determine which online spaces individuals consider public and private. In a qualitative study which explored UK social media users' views on the use of their data in research there was a similar divide. Some participants believed there is no privacy online and that by posting you automatically consent to wider use of your data, while others argued consent should always be sought for reasons of common decency and intellectual property (Beninger *et al.* 2014). Svenningson Elm (2009) proposes that notions of online privacy exist on a continuum from public, semi-public (accessible to anyone but requiring registration), semi-private (formal requirements for membership) to private and that there are "*fuzzy boundaries*" between these concepts (p77).

The ambiguity of public versus private spaces online raises important questions about whether researchers should inform individuals that they are using their data and whether informed consent is sought (Germain *et al.* 2017). The British Psychological Society (2013) guidance on this matter are arguably open to interpretation, stating that where there is no likely perception or expectation of privacy online then the use of research data without gaining valid consent may be justifiable.

YouTube is a public online platform (i.e. it is readily accessible to anyone (BPS, 2013)). It promotes itself under the tagline “Broadcast yourself” inviting users to share videos globally. It is possible to create an account (“channel”) on YouTube which allows users to access functions such as uploading, commenting and subscribing, but both YouTube videos and the associated comments are visible to anyone with no login required. In addition, YouTube also gives users the option to make their videos private (i.e. they can only be viewed by friends) and send direct messages for information they do not wish to share in public comments. It is reasonable to suggest that the YouTubers included in this study (with > 1 million subscribers each) were aware that their videos are in the public domain. YouTubers in the sample had a minimum of 3 million subscribers and their cumulative video views ranged from 200 million to 12 billion. Additionally, these YouTubers, distinct from those who have created a video which has gone unexpectedly viral, considered creating these videos as their profession and so were explicitly aware of the public nature of the content they produce (Abidin 2017). It was therefore argued, in line with the BPS guidance, that gaining consent from these individuals is not necessary as long as they were sufficiently protected from harm (see below).

There is slightly more ambiguity when considering the collection of comments from these videos. While YouTubers were deliberately creating content for the public domain, where individuals commenting on these videos equally aware that the comments they produced were publicly visible (Reilly 2014)? The high viewing figures, subscription figures and the number of comments and likes visible on each video suggests that those commenting on them were aware of the potentially public nature of their comments. Commenters were required to create an account to post comments suggesting that they had made an explicit decision to post. It was also common beneath these videos to see comments asking for “thumbs up” or followers suggesting that commenters were aware and even seeking a large audience for their posts. However, this may not have been true for all commenters (Beninger 2017) and, as highlighted in the BPS guidance, there remains a greater level of ambiguity in these situations. The BPS (2013) recommend careful consideration of the potential harm of undisclosed observation and key to this is preserving individual anonymity. For this reason, the decision was made to paraphrase certain quotes taken from comments and this is outlined in greater detail below.

Anonymising quotes and protecting from harm

The issue of public and private space online is intrinsically linked with the researcher's responsibility to protect individuals from harm. If an online space is deemed public, then verbatim quotes used in the research could be searched for and therefore identify the original post and individual posting. Both the BPS (2013) and AoIR (Markham and Buchanan 2012) invite caution when quoting verbatim from online sources. Researchers must ensure that there are no serious risks of harm to the participants (Markham and Buchanan 2012; British Psychological Society (BPS) 2013).

Study 2 used verbatim quotes transcribed from selected YouTube videos and paraphrased quotes from user comments. The non-sensitive nature of this research suggests that little harm would come to the participants; however, the BPS make two suggestions to ensure that participants are sufficiently protected. Firstly, they suggest that quotes should not be included alongside their source site; for this reason, the YouTubers from which videos were selected and the usernames of those posting comments have been removed and will not be included in any publications from this study. It was, however, considered essential to the research findings to state that the study took place on YouTube. The BPS (2013) state that where data is drawn from "large, ubiquitous, social network sites" such as YouTube it is clear that the risk of harm from identifying the site is low.

Secondly, the BPS (2013) suggest it can be relatively easy to trace written verbatim quotes to their source through search engines such as Google, thus compromising individuals' anonymity and confidentiality. In some cases, paraphrasing may therefore be necessary. To address this concern, in addition to removing usernames and assigning pseudonyms, quotes from comments have been partially paraphrased with insignificant words changed to ensure they are not traceable. Every quote included was firstly searched for in three major search engines (Google, Yahoo, Bing) and the YouTube search bar to ensure participants were not indirectly identifiable. If a quote was identified through this process, minor paraphrasing was used until it was no longer identifiable. Prior to using this method, it was tested using a small scoping exercise. The most popular video (~20 million views) from one of the top YouTubers in the sample was selected and the top ten most popular comments were searched for

verbatim in three search engines (Google, Bing and Yahoo) and the YouTube search function. Results were examined for the first five pages of each search engine. The verbatim quotes were not identified in the top five pages of results for Google, Bing and Yahoo or the top ten search results on YouTube. It was therefore suggested that presenting comments without any identifiable information (usernames etc.) and paraphrasing insignificant words will sufficiently protect those quoted from indirect identification.

Reflective Stop Off: Online Methods Group (OMG)

The netnographic study created the greatest unease for me when I was seeking ethical approval. Ethically, I knew that the information I was collecting was in the public domain and that both YouTubers and most commenters were aware of this. I was confident I was protecting from harm by anonymising the non-sensitive information I was collecting. Practically, I also knew it would be impossible to seek consent for every comment included in the study; even by using a subsample, I initially downloaded and screened approximately 130,000 comments across 133 videos. However, the process of taking data an individual had posted online without their consent was not a decision I always felt comfortable with. This was exacerbated by the breaking of the Cambridge Analytica Scandal in the international press during my data analysis phase. Cambridge Analytica along with a researcher from the University of Cambridge had harvested data from more than 50 million Facebook profiles and used psychological profiling garnered from this information to target political advertisements at US voters during the election period. While this was a far cry away from my own research outcomes and methods, it did highlight the real risks of researchers making decisions based on what they assume to be harmless for the individuals involved.

I was therefore very lucky to have support from colleagues when I was making these decisions. In the first few months of my PhD, I formed an Online Methods Group (OMG) with three other PhD students. Jen, Clare, Sean and I were all using online methods in our PhDs which at the time was not common across our Faculty. We met monthly throughout the course of my PhD and discussed the various ethical and methodological challenges that came up. Jen and Sean were entering the final year of their PhDs when we began the group and so had set certain precedents within their own ethics applications which Clare and I were able to build upon in

our own research designs. We published a paper as a result of our experiences (Germain et al. 2017) which had the dual advantages of bringing together our newly gained expertise and also exposing our ethical decisions to the scrutiny of external peer review. The Online Methods Group was invaluable in supporting me to make informed and confident ethical decisions in my research.

2.6: Issues of Validity and Trustworthiness

Issues of validity and trustworthiness have been given growing attention in the mixed methods research in the last decade (Onwuegbuzie and Johnson 2006; Teddlie and Tashakkori 2010). Traditionally, the issue was addressed separately for qualitative and quantitative perspectives without any mixture across the two methodologies (Tashakkori and Teddlie 1998). However, more recently mixed methods researchers have developed several new perspectives on this issue including construct validity (Leech 2010) and interpretative rigor (Teddlie and Tashakkori 2009). Mixed methods add an additional layer of complexity to discussions of validity, requiring the consideration of the complementary strengths of qualitative and quantitative research as well as their non-overlapping weaknesses (Onwuegbuzie and Johnson 2006). This was particularly problematic in this complex study where mixing had occurred at all stages of the research design.

Even the term validity is problematic within the mixed methods literature as it is too rooted in the quantitative tradition (Tashakkori and Teddlie 2003). Onwuegbuzie and Johnson (2006) propose the alternative term “legitimization” and identify nine forms in relation to mixed methods research. However, the authors also highlight that the process of legitimization should not replace separate assessments of validity and trustworthiness as each step of the research process should be scrutinized (Onwuegbuzie and Johnson 2006). The steps undertaken to ensure the validity and trustworthiness of the quantitative methods (study 1) and qualitative methods (studies 2,3 & 4) are described below while Onwuegbuzie and Johnson’s (2006) nine forms of legitimization are revisited alongside the triangulation of results in chapter 8.

Validity, Reliability and Generalisability

Validity, reliability and generalisability are key concepts in quantitative research (Bryman 2012). Table 3.1 below describes the steps taken to ensure this throughout the development and collection of the school questionnaire data. The limitations relating to this study are outlined in greater detail in chapter 4.

Table 3.1: Validity, Reliability and Generalisability of the school-based questionnaire (study 1)

Validity	Steps taken in the research process
<i>Content Validity</i>	<p>An extensive review of the literature was undertaken on the concepts measured by the questionnaire: namely young people’s social media use, YouTube use, their practices of online health seeking and social media literacy</p> <p>Standardised measures were used for demographic variables (gender, age, ethnicity, deprivation, self-reported health, wellbeing) and social media use. Further details are included in chapter 4.</p> <p>The questionnaire was piloted with 21 young people (age 13-18 years) who were invited to give qualitative feedback and annotate the questionnaire in order to establish face validity. In addition, two members of the supervisory team who had extensive experience of research with children and young people also reviewed the questionnaire.</p>
<i>Construct validity</i>	<p>Three constructs were measured by the questionnaire which did not have pre-existing validated measures. These scales sought to measure young people’s seeking of health information on YouTube, young people’s confidence in finding good quality information, and their digital literacy in relation to this health information. The scales were developed based on existing quantitative and qualitative studies. A full description of the scale development is included in chapter 4.</p> <p>The three scales were piloted with 21 young people (age 13-18 years) and their feedback was incorporated into the final questionnaire design (chapter 4).</p>
Reliability	<p>The internal consistency of the non-validated scales described above was tested using Cronbach’s Alpha. Each scale was found to be internally consistent (Cronbach’s $\alpha > 0.8$)</p>
Generalisability	<p>Due to the challenges of recruiting schools to the study, a convenience sample of 931 pupils from 6 schools in a single</p>

	<p>county in North West of England was recruited. Chapter 4 describes the limitations of this sample in terms of representativeness.</p> <p>Through-out the analysis, significance ($p < 0.05$) and effect sizes were reported.</p>
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Trustworthiness of qualitative research

The steps followed to ensure qualitative trustworthiness in the research are based on the framework developed by Shenton (2004). The framework builds upon Guba's (1981) four constructs of trustworthiness namely credibility, transferability, dependability and confirmability. Numerous frameworks exist for assessing these concepts in qualitative research but Shenton (2004) was chosen as it draws on his own work on the information seeking-behaviours of young people which is similar to the context of this study. The steps taken in the three qualitative studies (studies 2,3 & 4) are outlined in table 3.2 below.

Table 3.2: Strategies for ensuring trustworthiness in the qualitative studies

Strategy	Approach undertaken in the research
Credibility	<p><i>Reflexivity:</i> field notes were made throughout the three stages of the qualitative data collection process that included reflection upon my own background in relation to my participants (included in chapter 1 and reflective stop-offs throughout). These reflections were revisited at the analysis stage and reflective excerpts have been included throughout the thesis.</p> <p><i>Adoption of appropriate methods:</i> the three research methods used (netnographic study, focus groups and interviews) were well-established however some changes were made to these methods as the study progressed which were confirmed through ongoing consultation of the emerging methodological literature. While each study was conducted separately, the sequential nature of the research design allowed for member checking to occur across the three studies with findings from the netnographic study introduced into the conversation during the focus group and interview studies (see section 2.2). In the focus group and semi-structured interviews, prompts and iterative questioning was used and discrepancies in responses are highlighted in the analysis.</p> <p><i>Developing familiarity:</i> as suggested by Kozinets (2015), time was taken before the start of the netnographic analysis to familiarise</p>

	<p>the researcher with the YouTubers selected. This involved viewing their YouTube channels and other social media to develop a general understanding of the content they produced and their audience. This process was repeated before the semi-structured interviews with YouTubers. For schools participating in the school-based focus groups, time was taken to develop trust with the teachers who acted as gatekeepers, in most cases the researcher visited the school before the groups took place to meet with individual teachers or to outline nature of the research project at staff meetings.</p> <p><i>Peer scrutiny:</i> regular meetings to discuss the process of data collection, coding and analysis were held with the primary supervisor, who specialises in qualitative research. Feedback from peers was also welcomed through-out the research via conference presentations and seminars.</p>
Transferability	<p><i>Comparison of sample to demographic data:</i> the questionnaire data from study 1 was used to guide the selection of YouTubers for the netnographic and semi structured interview studies. The gender and age-related differences observed in the questionnaire was used to develop the sampling frame for the focus group study.</p> <p>The study made use of purposeful sampling to ensure that these demographics were represented and that young people and YouTubers recruited had knowledge of YouTuber health content and so were consistent with the research design. Thick descriptions of the participants, context and research design have been employed throughout to allow the reader to make their own determinations about transferability.</p>
Dependability	<p><i>Overlapping methods:</i> the three qualitative methods used: netnographic study of YouTuber videos and comments, focus groups with young people and semi-structured interviews with YouTubers to allow breadth and depth of understanding of the phenomena.</p> <p><i>Data description:</i> transparent description of the data collection processes and dense description of the data was used to allow for transferability of the data.</p>
Confirmability	<p><i>Triangulation:</i> a systematic protocol for triangulating the research findings (Farmer <i>et al.</i> 2006) alongside constant reflection on my own beliefs and assumptions (summarised in chapter 1) were used to reduce the effect of researcher bias. Clear description of the methods used were recorded as the data collection progressed and the limitations of each method were reflected upon at each stage of qualitative data collection</p>

Limitations

Throughout this chapter, care has been taken to not only describe the strengths of the mixed methods approach but also acknowledge the limitations and complexities of the methodology. The limitations of each individual study are presented in each respective chapter (4, 5, 6 &7) alongside the data collection procedure and results of each study. The overall strengths and limitations of the research is presented alongside the triangulation of the results in chapter 8.

2.7: Summary

In summary, this chapter provided an overview of the mixed methods research design including the overall design typology and points of integration. The research used a four stage, sequential mixed methods design which combined:

- a school-based questionnaire study with 931 13-18-year olds which quantified young people's engagement with professional YouTubers and the role this plays in sourcing health related information
- a netnographic study of seven UK YouTubers which involved thematic analysis of 133 videos and 130,000 comments to examine the way in which health information is intentionally and unintentionally communicated by professional YouTubers.
- Seven school-based focus groups with 85 young people aged 13-18 years to explore the way in which the health content produced by YouTubers influences young people's health behaviours.
- Semi structured Skype interviews with 3 UK YouTubers to explore the role that professional YouTubers believe they play in the communication of health messages.

The triangulation protocol is introduced and the ethical considerations in relation to online research and research with children are outlined. Finally, the validity and trustworthiness of the research methods are accounted for throughout the various stages. As previously signposted, more detailed information on the sampling, data collection, data analysis and limitations of each study can be found in chapters 4,5,6 and 7. These findings are triangulated to reflect their agreement and divergence in chapter 8.

Chapter 4: A school-based survey examining young people's engagement with YouTuber health content (study 1)

This chapter presents the findings from a questionnaire study with 931 young people (aged 13-18 years). The objective of study 1 was to quantify both young people's engagement with professional YouTubers and the role this plays in sourcing health related information. This study also provided a sampling frame for studies two and three by identifying the most popular YouTubers for young people. The study methods are described below, followed by the survey results and a discussion of the wider implications of these findings.

4.1: Methods

Survey sample and procedure

Young people (aged 13-18 years) were recruited via schools and colleges from a single county in the North West of England. The inclusion criteria for the questionnaire was minimal; any pupil in years 9-13 could participate. Email invitations were sent to all schools and colleges in the county either by the researcher (n=77) or through the University's school outreach programme (n=19). Email reminders were sent to non-responding schools at two and four weeks. The head teacher (or delegated staff member) of schools and colleges agreeing to participate completed a gatekeeper consent form. In total, six schools agreed to participate in the research: a response rate of 6%. As such, the sample was a self-selecting, convenience sample with schools entirely state funded and a higher proportion (59%) of responses coming from schools with low income deprivation affecting children (IDACI) (table 4.1). The limitations of this approach in terms of generalisability are outlined in section 4.3.

Table 4.1: School Sample Characteristics

SCHOOL	SCHOOL TYPE	PUPILS	IDACI DECILE	RESPONSES
S1	State funded, no religious character	Boys	7	140
S2	State funded, no religious character	Mixed	3	56
S3	State funded, sixth form college	Mixed	6	406
S4	State funded, sixth form college	Mixed	2	108
S5	State funded, no religious character	Mixed	1	117
S6	State funded, no religious character	Mixed	1	104

Opt out parental consent was used for participants under 16 years of age. Opt-out parental consent is a common method for anonymous surveys with young people, particularly in school settings (Bagnall 1998; Tigges 2003; Farmer and Porcellato 2016). Evidence suggests that opt-out parental consent can produce a larger and less skewed sample than opt-in consent (Tiges, 2003; Crow et al, 2006; Hewison and Haines, 2006; Junghans et al, 2006; Spence et al, 2015). Parent/carers were sent an opt-out letter through the schools' normal communication channel that fully explained the study (Appendix A). Parents/carers who did not wish their child to participate in the study informed the school. It was the responsibility of each school to ensure that pupils who were opted out of the study did not participate and so the number of pupils who opted out is unknown.

Schools chose to complete either paper (n=814) or online format (n=117) surveys during class time, administered either by the teacher (n=4) or the researcher (n=2). The questions and format of the online and paper based survey were kept the same to ensure the mixed modes results maintained reliability and equivalency (Kaplowitz *et al.* 2004). However, the mode of the participant information sheet did differ; for paper format respondents the participant information sheet was included within the questionnaire (Appendix B) as written text while online respondents viewed the participant information as a short animated video⁸. A video was chosen, since written participant information is more likely to be skimmed or misunderstood online (Markham and Buchanan 2012).

⁸ Video available at: <https://www.youtube.com/watch?v=9Xrwtji4ITk&t=2s>

Ethical approval for the study was granted by the LJMU Research Ethics Committee (ref: 16/PBH/009).

Questionnaire development

A 26-item questionnaire was developed, based on common themes and gaps identified in the literature (chapter 2), to collect self-reported data on the following variables: demographics (gender, age, postcode, ethnicity and self-reported health and wellbeing (WEMWBS)), social media and YouTube use, YouTubers viewed, recall and seeking of YouTuber health content and confidence in assessing the quality of this information. The survey included multiple-choice, Likert scale and free text questions. The questionnaire took approximately 15 minutes to complete.

Measures

Demographics: Demographic questions were based on existing questionnaires. Overall health was a self-reported measure (very good to very poor) based on the UK government Youth Survey (NHS Digital 2015). A dichotomous variable was created for “good health” (very good, good or fair) versus “bad health” (bad or very bad health). Wellbeing measures were taken from the shortened Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS, 2006). Deprivation score was calculated based on the respondents’ postcode using the Income Deprivation Affecting Children Index (IDACI).

Social media and YouTube use: Participants were asked which social media platforms they used (Facebook, Instagram, Kik, Snapchat, Tumblr, Twitter, Vine, WhatsApp, YouTube) and how they accessed social media (Smartphone, Tablet/iPad, iPod, Laptop, Desktop Computer, Games Console, Kindle/e-reader). Participants were asked how frequently they had used any social media or YouTube specifically in the past 3 months (daily to almost every day – never used) and in the past 24 hours (from this time yesterday to now, less than one hour to more than 6 hours) based on the Office for National Statistics internet usage survey (Office for National Statistics 2016)

YouTube use: Participants were asked if they had ever used YouTube (yes = 1, no & don't know=0) and how they had used it (watch videos, comment on videos, like videos, share videos with friends, upload videos, message or talk to other people in the comments). This was recoded to create a dichotomous variable (among those who had used YouTube) of those who had engaged with YouTube beyond simply watching a video (commenting, liking, sharing, uploading, messaging) and those who had not.

Youtubers: Participants were asked to indicate which YouTubers they watched from a list of the 50 most popular UK YouTubers (by number of subscribers). A free text follow up question also allowed them to identify any other UK YouTubers they had watched. Participants were asked what influenced their decision to watch a video on YouTube (the topic/content, the YouTuber, the video title, the video thumbnail, the way they talk/language, the quality of the filming, the editing, number of views, number of likes). They were asked to rate the health of the YouTubers they watched along a five point scale (very good – very poor). Participants were asked if they could remember any of several health topics being mentioned by the YouTubers they had watched (mental health, relationships, confidence, smoking, fitness/exercise, sexual health, friendships, food/healthy eating, alcohol, drugs, body image, illness or health condition). A yes/no variable was created from this question for those who selected any health topic.

Seeking health information on YouTube: Participants were asked if they had ever used YouTube to look for advice on any of several health topics (mental health, relationships, confidence, smoking, fitness/exercise, sexual health, friendships, food/healthy eating, alcohol, drugs, body image, illness or health condition). A yes/no variable was created from this question for those who had sought advice on any health topic.

Confidence in assessing the quality of YouTuber health information: Young people's confidence to assess the quality of health information and to perform certain health seeking behaviours on YouTube was measured using questions adapted from the Participatory e-health behaviours survey (Chen and Lee 2014) with a question about identifying real versus fake information informed by qualitative work with this age group (Livingstone 2014). Young

people responded (yes, no, don't know) to three items measuring their confidence to perform certain e-health behaviours ($\alpha = .827$, example: *I feel confident to find helpful health information on YouTube*). Young people were asked if they had engaged (yes, no) in certain health behaviours on YouTube (example: *Follow the health experiences of a YouTuber online*). Finally, participants were asked if they felt confident (yes, no, don't know) to perform five quality assessment tasks on YouTube ($\alpha = .81$, example: *I feel confident to tell the difference between good and bad quality health information*, table 5). Responses to these five items (yes=1, no, don't know =0) were used to develop a confidence score (4-5=high, 2-3=medium, 0-1=low).

Pilot

The questionnaire was piloted with a group of young people aged 13-18 years who were recruited through parents and relatives employed at the researcher's university institute. In total, 21 young people completed the pilot questionnaire but, as participants were encouraged to share the survey with friends, it is not possible to calculate a response rate. For participants under 16 years, parental response to the call for volunteers was seen as parental consent to participate. All participants recruited through other relatives (e.g. sibling, aunt) were over 16 years of age and so able to give informed consent. Pilot participants were randomly allocated to either the online (n=7) or paper version (n=17) of the questionnaire. Participants reported how long the survey took to complete, and gave written feedback, including annotation of the questionnaire on ease of understanding and suggestions for changes or improvements. Feedback from the pilot resulted in minor changes to the wording of questions and the participant information sheet including simplifying language and adding images and colour. Participants found the question that measured young people's confidence in performing e-health behaviours and quality assessment tasks (question 24) difficult to understand. As a result this was changed from a five-point Likert scale (strongly agreed - strongly disagree) to a simpler multiple-choice response (yes, no, don't know). The mean completion time for the survey was 12 minutes (paper questionnaire =12 minutes, online questionnaire = 11 minutes).

Analysis

Data was cleaned, recoded and analysed in SPSS v.23. Frequencies were used to provide descriptive data on the sample (table 4.2) and frequencies and medians (due to non-normal distribution of data) are reported throughout. The relationships between demographic variables (gender, age, ethnicity, self-reported health status, WEMWBS score) and social media use, YouTube use, engagement with YouTubers and YouTube health content were investigated using Chi Squared test for independence and non-parametric testing (Mann Whitney U, Kruskal Wallis). Significance was reported at $p < 0.05$. An ordinal logistic regression was employed to assess if differences in confidence to determine the quality of YouTube health information (based on calculated score) varied by gender, self-reported health status, wellbeing, daily social media use, daily YouTube use, number of YouTubers watched, remembering YouTuber health content and seeking of health advice on YouTube. Collinearity was found with age (Under 16 VIF=156.9, Over 16 VIF=160.3) so age was not included in the regression model. These co-variables were chosen based on their hypothetical association with the outcome variable. There were proportional odds, as assessed by a full likelihood ratio test comparing the fitted model to a model with varying location parameters ($\chi^2(9) = 11.375, p = .251$).

4.2 Results

Demographics

A summary of the sample characteristics is included in table 4.2. The questionnaire was completed by 931 high school and college students. Approximately half were male (55.2%), 59.3% aged 16-17 years, 91.8% were of white ethnicity and 64% described their health as “very good” or “good”. IDACI scores show that 18.9% of participants were living in areas in the most deprived decile of the UK. Mean mental wellbeing (WEMWBS) was 45.7 which is slightly lower than the average (mean=48) from available national survey data (15-16 year olds) (NHS Digital 2015).

Social Media Use

The median number of social media platforms used by respondents was five (min=1, max=10, r=9, n=916). The most frequently used were YouTube (85.9%), Facebook (81.1%), Snapchat (80.5%) and Instagram (78%). The most commonly used device to access social media was a smartphone (94.3%) and the median number of devices used was two (min=1, max=7, r=6, n=910). Females (mdn=5) used significantly more social media than males (mdn=4, U=117,955, z=5.76, p<0.001, r=0.19)⁹. The number of social media platforms used was also significantly associated with age (H (3) =18.97, p=0.008) and Jonckheere's test revealed a significant trend in the data: the number of social media used increased with age (J=176,164, z=2.24, p=0.013, r=0.07). There was no significant association between number of social media used and self-reported health or wellbeing.

Participants recalled the frequency of their social media use over the past three months and in the past 24 hours. The majority (91.3%) had used social media 'daily or almost every day' and 70% reported using social media for three or more hours in the past 24 hours with 27.1% reporting more than 6 hours of use. Females reported significantly higher social media use in the past three months ($X^2=15.1$, p=0.005) and 24 hours ($X^2= 39.6$, p<0.001) than males. Daily or almost daily social media use was reported by 94.8% of females (n=368) compared with 89.1% of males (n=458). A third (32.4%, n=122) of females reported use for more than six of the past 24 hours compared with 23.7% (n=120) of males. Frequency of social media use in the past 24 hours (< 1 hour - >6 hours) was significantly associated with age (<16, ≥16, $X^2= 14.8$, p=0.005). Among under 16s, 31.6% (n=87) reported they had used social media for more than six hours compared with 26.6% (n=165) of those 16 and over. No significant association was found between age and three-month use.

⁹ Excluded cases=28, Missing =15

Table 4.2: Sample Characteristics

		n	%
Gender	Male	514	55.2
	Female	388	41.7
	Prefer not to say	27	2.9
	Missing	<5	0.2
Age	Under 13 years	49	5.3
	13 years old	58	6.2
	14 years old	80	8.6
	15 years old	106	11.4
	16 years old	270	29
	17 years old	282	30.3
	18 years old	73	7.8
	Over 18 years old	11	1.2
	Missing	<5	0.2
Ethnicity	White	855	91.8
	Arab	10	1.1
	Black African/ Caribbean/Black British	6	0.6
	Chinese	6	0.6
	Asian/Asian British	16	1.7
	Mixed/multiple groups	24	2.6
	Other	11	1.2
	Missing	<5	0.3
IDACI (2015) decile	1	176	18.9
	2	64	6.9
	3	50	5.4
	4	63	6.8
	5	51	5.5
	6	43	4.6
	7	43	4.6
	8	27	2.9
	9	35	3.8
	10	24	2.6
	Missing	355	38.1
Self-reported health status	Very good	166	17.8
	Good	430	46.2
	Fair	202	21.7
	Bad	48	5.2
	Very bad	11	1.2
	Don't know	71	7.6
	Missing	<5	0.3
WEMWEBS	Mean Score	45.7	
	Missing	6	0.6
Total		931	100

YouTube use

The majority (92.7%) of respondents had ever watched a video on YouTube (higher than the proportion who selected YouTube in the earlier question about social media use; 80.5%), 47.8% had their own YouTube channel and 10.2% had ever uploaded a video to YouTube. The majority of participants (n=575, 61.8%) used YouTube daily or almost daily. There was a significant association between frequency of YouTube use (past three months) and gender ($X^2=106.5$, $p<0.001$) with 76.8% of males (n=383) using YouTube daily or almost daily compared with 45.4% of females (n=172). There was also a significant association between frequency of YouTube use and age ($X^2=30.6$, $p<0.001$) with 70.7% (n=198) of under 16s using YouTube daily or almost daily compared with 60.3% (n=375) of over 16s. There was no significant association between frequency of YouTube use and health or wellbeing.

The most common uses (n=816) were watching videos (95.2%), liking/disliking videos (44.1%) and sharing videos (30%). Engaging with YouTube beyond watching videos (liking, commenting, sharing, uploading or messaging, n=513, 55.1%) was significantly higher ($X^2=26.9$, $p<0.001$) among males (n=321, 62.5%) than females (n=175, 45.1%). There was also a significant association between engagement with YouTube and self-reported health (n=857¹⁰, $X^2=12.1$, $p<0.001$) with odds of engaging 2.87 times higher in those who reported bad health (bad or very bad) than those who reported good health (very good, good, fair). There was no significant association between YouTube engagement and age or wellbeing.

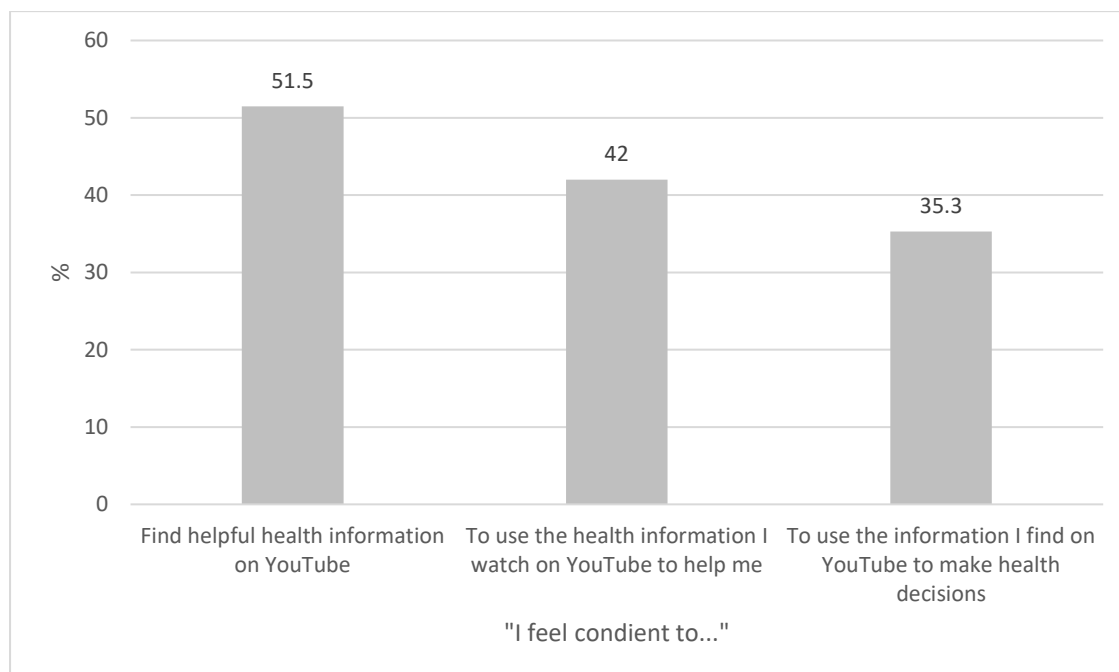
YouTube and health messages

Participants were asked about their confidence to perform certain health information seeking behaviours on YouTube (figure 4.1): 51.5% felt confident using YouTube to find helpful health information, 42% felt confident using health information from YouTube to help them and 35.3% felt confident using the information to make health decisions. Among responding participants (n=875), 61.3% felt confident to perform at least one of these health seeking

¹⁰ Excluded cases=71, Missing= 3

behaviours and 28.4% had performed all three. There was a significant association between the number of social media platforms used and confidence in health information seeking ($H(3) = 18.8, p < 0.001$). Jonckheere's test revealed a significant trend in the data: the number of social media platforms used increased with confidence in health advice seeking behaviours reported ($J = 148,855, z = 4.19, p < 0.001, r = 0.14$). There was also a significant association between the number of YouTubers watched and confidence in health information seeking ($H(3) = 11.6, p = 0.009$). Jonckheere's test revealed a significant trend in the data: the number of YouTubers watched increased with confidence in health seeking behaviours ($J = 99,312, z = 3.03, p = 0.002, r = 0.99$). There were no significant associations between confidence in health information seeking and gender, age, health status or frequency of social media use.

Figure 4.1: Confidence in seeking health information on YouTube (% , n=931)



Participants were also asked if they had ever used YouTube to look for advice on a number of health topics (table 4.3); 46.7% of participants had used YouTube to look for advice on at least one health topic. The most frequently mentioned were fitness/exercise (22.2%), confidence (16.8%), mental health (16.4%) and body image (14.2%). A significantly higher proportion of females had sought health advice on YouTube compared with males (59.5% vs 38.1%, $\chi^2 = 40.6, p < 0.001$) with the odds of females seeking health advice 2.4 times higher than for males. As summarised in full in table 4.3, a significantly higher proportion of females had sought advice

on mental health and confidence, exercise, healthy eating and relationships and friendships, while a small but significantly higher proportion of males had sought advice on drugs (excluding alcohol). There was also a significant association between age and seeking any health advice on YouTube ($X^2=9.0$, $p=0.003$) with 50.2% ($n=319$) of those aged 16 and over seeking advice compared with 39.6% ($n=116$) of under 16s. There was no significant association between seeking of any health advice and self-reported health status, however a significantly higher proportion of those reporting bad health had sought advice on smoking, confidence and drugs and those reporting good health had sought advice on fitness and exercise.

Respondents were also asked to indicate if they had ever undertaken a number of health information seeking and sharing behaviours on YouTube, summarised in figure 4.2. The most frequently reported behaviours were using YouTube to “look for videos of people with a similar health concern to you” (21.5%, $n=200$). The proportion of participants reporting these kinds of information seeking behaviours is notably smaller than the proportions recalling and seeking advice on specific topics.

Figure 4.2: Confidence in health information seeking on YouTube (% , n=931)

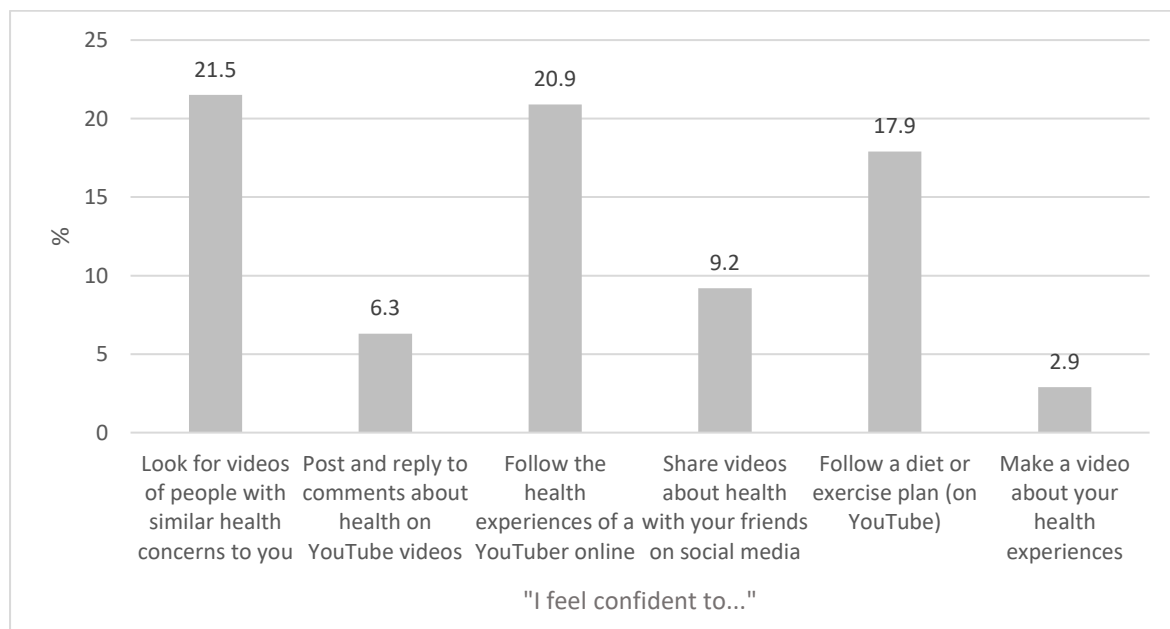


Table 4.3: Health advice sought on YouTube by gender, age and self-reported health

	Total		Male		Female		χ ²	p	<16		≥16		χ ²	p	Good health		Bad health		χ ²	p
	n	%	n	%	n	%			n	%	n	%			n	%	n	%		
	Mental Health	153	16.4	63	12.3	84	21.6	14	<0.001	43	14.7	110	17.3	1	0.3	127	15.9	13	22	1.5
Food/ Healthy Eating	158	17	65	12.6	92	23.7	19	<0.001	44	15	114	17.9	1.2	0.3	137	17.2	11	18.6	0.08	0.8
Smoking	31	3.3	21	4.1	8	2.1	2.9	0.09	16	5.5	15	2.4	6	0.01	20	2.5	6	10.2	11	0.001
Body image	132	14.2	33	6.4	94	24.2	58	<0.001	34	11.6	98	15.4	2.4	0.1	115	14.4	8	13.6	0.03	0.9
Friendships	115	12.4	49	9.5	64	16.5	9.8	0.002	39	13.3	76	11.9	0.3	0.6	95	11.9	8	13.6	0.1	0.7
Confidence	156	16.8	70	13.6	83	21.4	9.5	0.002	55	18.8	101	15.9	1.2	0.3	127	15.9	16	27.1	5	0.03
Drugs	53	5.7	38	7.4	13	3.4	6.8	0.009	20	6.8	33	5.2	1	0.3	38	4.8	7	11.9	5.6	0.02
Sexual Health	41	4.4	17	3.3	22	5.7	3	0.08	16	5.5	25	3.9	1.1	0.3	33	4.1	2	4.3	0.8	0.8
Relationships	118	12.7	49	9.5	66	17	11	0.001	35	11.9	83	13.1	0.2	0.6	102	12.8	8	13.6	0.03	0.9
Alcohol	37	4	20	3.9	15	3.9	0	1	15	5.1	22	3.5	1.4	0.2	26	3.3	4	6.8	2	0.2
Fitness/Exercise	207	22.2	89	17.3	117	30.2	21	<0.001	45	15.4	162	25.5	12	0	188	23.6	7	11.9	4.3	0.04
Total	931		514		388				293		636				798		59			

YouTubers

Participants were asked to indicate which YouTubers they watched from a list of the top 50 UK based YouTubers (by number of subscribers). At least one of the YouTubers were watched by 79.9% of participants and the median number of YouTubers watched was 9.5 (n=744, Min=1, Max=50, r=49). Participants were asked to rate the health of the YouTubers they watched (n=777); 69.2% (n=538) rated the health of the YouTubers they watched as “very good” or “good”. The most common influences on participants decisions to watch a video on YouTube were the topic/content (62.4%, n=581), the YouTuber (58.6%, n=546) and the video title (38.5%, n=358). The least commonly selected influences were measures of video popularity, namely the number of likes (7.1%, n=66) and number of views (11.7%, n=109). There was a significant association between gender and video aesthetics on the influence to watch with a higher proportion of males reporting quality of filming (31.3% vs 20.6%, $X^2=12.9$, $p<0.001$) and video editing (23.5% vs 14.9%, $X^2=10.3$, $p=0.001$) as affecting their decision to watch. A significantly higher proportion of males (65%, n=334) than females (51%, n=198) also reported that the YouTuber was an influence on their decision to watch ($X^2=17.8$, $p<0.001$). There were no significant associations with health status.

YouTubers and health messages

Overall, 70% of participants could remember YouTubers talking about at least one health topic. As summarised in table 4.4, wider health and wellbeing topics were more frequently recalled while health risk behaviours (alcohol, smoking, drugs and sexual health) were less frequently recalled. There was no significant association between gender, age or health status and remembering any health related content; however, as summarised in full in table 4.4, there were significant associations between these demographics and recall of certain types of health content. Females were significantly more likely have seen mental health, confidence, body image, healthy eating and, relationship content while males were more likely to have seen risk behaviour content. A significantly higher proportion of over 16s selected mental health, relationship and body image content and those reporting bad health (“bad” or “very bad”) selected risk behaviour, body image and health condition content.

Table 4.4: Remember YouTubers talking about health topics by gender, age and self-reported health status

	Total		Male		Female		X ²	p	<16		≥16		X ²	p	Good		Bad		X ²	p
	n	%	n	%	n	%			n	%	n	%			n	%	n	%		
Mental Health	376	40.4	171	33.3	190	49	22.7	<0.001	97	33.1	279	43.9	9.6	0.002	313	39.2	30	50.8	3.1	0.08
Relationships	403	43.3	194	37.7	168	51	15.9	<0.001	105	35.8	298	46.9	9.9	0.002	342	42.9	30	50.8	1.4	0.2
Confidence	374	40.2	182	35.4	156	46.9	12.1	<0.001	110	37.5	263	41.4	1.2	0.3	318	39.8	30	50.8	2.6	0.1
Smoking	141	15.1	93	18.1	41	10.6	9.9	0.002	50	17.1	91	14.3	1.2	0.3	112	14	19	32.3	14	<0.001
Fitness/ Exercise	283	30.4	162	31.5	114	29.4	0.48	0.5	88	30	195	30.7	0.04	0.8	250	31.3	19	32.3	0.02	0.9
Sexual Health	175	18.8	97	18.9	66	17	0.52	0.5	49	16.7	126	19.8	1.3	0.3	140	17.5	17	28.8	4.7	0.03
Friendships	448	48.1	240	46.7	198	51	1.67	0.2	139	47.4	308	48.4	0.08	0.8	385	48.2	31	52.5	0.4	0.5
Food/Healthy Eating	310	33.3	157	30.5	143	36.9	4	0.046	99	33.8	211	33.2	0.03	0.9	264	33.1	24	40.7	1.4	0.2
Alcohol	241	25.9	147	28.6	81	20.9	7	0.008	72	24.6	168	26.4	0.4	0.6	192	24.1	28	47.5	15.8	<0.001
Drugs	220	23.6	147	28.6	62	16	19.8	<0.001	68	23.2	151	23.7	0.03	0.9	175	21.9	27	45.8	17.3	<0.001
Body image	307	33	123	23.9	172	44.3	41.8	<0.001	74	25.3	233	36.6	11.7	0.001	258	32.3	30	50.8	8.4	0.004
Illness or health condition	193	20.7	109	21.2	74	19.1	0.6	0.4	63	21.5	130	20.4	0.1	0.7	150	18.8	25	42.4	18.8	<0.001
Total	931		514		388				293		636				798		59			

Confidence in assessing the quality of YouTube health information

Participants were asked to indicate how confident they were in critically assessing health related information on YouTube. The majority, (83.9%, n=729) felt confident to perform at least one quality assessment item with 32.1% (n=279) feeling confident to perform all five (table 4.5), Over half felt confident in performing each item with the exception of identifying videos sponsored or working with the NHS and health charities (47.8%, n=445). A high confidence score was reported by 48.2% of participants.

Table 4.5: Participants confidence to assess the quality of YouTube health content

I feel confident to...	n	%
Tell the difference between good and bad quality health information	511	54.9
Tell the difference between what is real and what is fake	597	64.1
Tell the difference between what is the YouTuber's opinion and what is fact	590	63.4
Know when the video is sponsored by a company or advertising a particular product	593	63.7
Know when the video is sponsored or working with the NHS or a health charity	445	47.8
Confidence score		
High (4-5)	449	48.2
Medium (2-3)	233	25
Low (0-1)	187	20.1

A cumulative odds ordinal logistic regression with proportional odds was run to determine the effect of gender, self-reported health status, wellbeing, daily social media use, daily YouTube use, number of YouTubers watched, recall of YouTuber health content and seeking of health advice on YouTube, on participants' confidence in their social media literacy score. Collinearity was found with age (Under 16 VIF=156.9, Over 16 VIF=160.3) so age was not included in the regression model. There were proportional odds, as assessed by a full likelihood ratio test comparing the fitted model to a model with varying location parameters, $\chi^2(9) = 11.375, p = .251$. The deviance goodness-of-fit test $\chi^2(1245) = 1181.717, p=.899$ and Pearson goodness-of-fit test $\chi^2(1245) = 1245.774, p=.512$ indicated that the model was a good fit to the observed data, but most cells were sparse with zero frequencies in 66% of cells. However, the final model statistically predicted the dependent variable over and above the intercept-only model, $\chi^2(9) = 1198.824, p < .001$.

A high confidence score for social media literacy was significantly predicted by whether or not participants could remember YouTubers talking about health topics ($\chi^2 (1) = 5.130, p=0.024$) and reported using YouTube to seek health advice $\chi^2 (1) = 22.449, p<0.001$. The odds of respondents who could not remember YouTubers talking about health related topics having a high confidence score was 1.61 times higher than that of respondents who could remember YouTubers talking about health related topics. The odds of respondents who reported never having sought advice on any health related topic on YouTube having a high confidence score was 2.2 times higher than that of respondents who had sought advice on health related topics. Good health, less than daily social media use, daily YouTube use, an increase in mean wellbeing (WEMWEBS) score and increase in the number of YouTubers watched increased the odds of a high social media score but these effects were not found to be statistically significant. Gender did not have a statistically significant effect on social media literacy score, Wald $\chi^2 (1) = 0.821, p=0.663$ (table 4.6).

Table 4.6: Predictors of high confidence score among participants

Predictor variables	Odds Ratio	95% CI	p
Good health	1.590	0.876-2.886	0.127
Less than daily social media use	1.156	0.642-2.081	0.630
Daily YouTube use	0.761	0.533-1.085	0.132
Recall YouTubers discussing health topics	0.612	0.400-0.936	0.024
Sought advice on health topics on YouTube	0.454	0.328-0.630	<0.001
Mean WEMWEB score	1.168	0.982-1.508	0.231
Number of YouTubers watched	1.001	0.982-1.021	0.885

4.3: Discussion

The aim of this study was to quantify young people's engagement with professional YouTubers and the role YouTube plays in their health behaviours. The scale of young people's engagement with professional YouTubers indicates their considerable potential for the promotion of health messages (boyd 2008) and in informing the design of YouTube based health interventions. However, whilst viewing and subscription data give an indication of the number of people engaging with professional YouTubers, relatively little is known about the characteristics of this population or health information they encounter. In addition, existing

content analysis studies on the quality and type of YouTube health information available focus on actively searching for health topics (“instrumental use” (Papacharissi and Rubin 2000)), but little research has considered the health information young people encounter during their everyday viewing. This survey provides valuable baseline data on this issue. In relation to the wider PhD, this stage also provides a sampling frame for a qualitative netnographic study of YouTubers (study 2).

The overall level (91%) and frequency (91% daily use) of social media use among participants was similar to the levels recorded for this age group in national survey data (Ofcom 2019a; Office for National Statistics 2019). YouTube use has until recently been neglected in UK survey data with YouTube use first recorded for young adults by ONS (Office for National Statistics 2016) and teens by Ofcom in 2016 (Ofcom 2016). The proportion reporting ever using YouTube in this sample (93%) was similar to national surveys among 12-15 year olds (89%) (Ofcom 2019a) and 16-24 year olds (98%) (Office for National Statistics 2019).

As previously discussed, YouTube is not always considered a social networking site in the narrowest sense (boyd and Ellison 2007; Beer 2008; boyd 2014) but recent research has highlighted “vlogging”, alongside other social media, as an important representation of self and identity which leads to interaction, community formation and informal learning (Wesch 2008; Scobie 2011; Miller 2016). Professional YouTubers and their audience are an important example of this and the results of this survey confirm that watching YouTubers is common among the sample (80%). This was substantially higher than the proportion of 12-15 year olds who reported watching vloggers in the national Media Attitudes Survey (52%) (Ofcom 2019b). The reason for this difference is unclear but could potentially be related to the terminology used in the two questionnaires. The current study used the broader term “YouTuber” alongside a list of 50 popular examples while the Media Attitudes Survey (Ofcom 2019b) used the term vlogger. Vlogger is a shortened form of the term “video blogger” and, is often associated with videos that record the daily lives of their creators. In the current study, 80% of respondents reported watching at least one YouTuber but data collected on the type of video watched (not reported above) revealed that only 39% selected “vlogs”. This highlights differences in terminology, which is particularly pertinent in research into young people’s

digital media use. Parallels can be drawn to recent qualitative research into “sexting” which has highlighted that this term is frequently used in media and academic contexts but is rarely used by young people (Ringrose *et al.* 2012; Albury *et al.* 2017). Young people’s YouTube terminology is something that will be explored and confirmed in the later qualitative stages (study 3).

While females reported higher overall social media use, males reported significantly more frequent YouTube use and more engagement (e.g. liking, commenting on videos). Previously published studies suggest that males are more likely to use social media for entertainment purposes while females are more likely to use social media for socialising purposes (Weiser 2000). Those with bad health reported 2.9 times higher odds of engaging compared with those with good health. This suggests that YouTube use may conform to previous research which indicates that those with poorer health and lower socio-economic status are more likely to use the internet for more time consuming, social and less instrumental purposes (Papacharissi and Rubin 2000; Chen and Lee 2014).

The main influences on watching a video were the YouTuber and the video content while social measures (i.e. the number of likes and views) were the least frequently selected. This contradicts the findings from previous qualitative work with young people which suggests that measures such as likes, comments and shares are important influences on how likely young people are to engage with an information source (Gold *et al.* 2012; Fergie *et al.* 2013; Hulme 2015). Likes and shares on social media are important elements of young people’s attempt to manage their self-presentation (Atkinson *et al.* 2016; Lincoln and Robards 2016). However, the results from this survey seem to suggest this is less influential in the wider and more public network of YouTube (Litt and Hargittai 2016) compared to sites like Facebook where there is greater emphasis on maintaining and strengthening existing social relationships (Robards 2010; Robards and Lincoln 2016).

The popularity of YouTubers as an influence on participants’ decision to watch is also an important point for further exploration. Firstly, because it confirms that YouTubers are a seemingly influential factor when considering the communication of health messages to young people. Secondly, this poses interesting questions on the role of YouTubers

themselves. YouTubers will arguably have begun using YouTube as a space to construct self and make themselves visible (Giddens 1991; Hearn 2008) and their growing audience in this context is more akin to neo-tribes or online post-subcultures (Maffesoli 1995; Bennett 1999; Robards 2010; Robards and Bennett 2011). However, as their audience size and profits have grown (the YouTubers included in this questionnaire had between one million and 50 million subscribers) the boundaries between self and brand have become increasingly blurred. In a health context, parallels can be drawn with research on “intoxicogenic digital spaces” (Griffiths and Casswell 2010; Nicholls 2012; Atkinson *et al.* 2016), where YouTubers, like the alcohol brands in these examples, have a symbolic value which help reinforce gendered, aged and classed identities among their audiences. These issues will be explored in greater detail in study 4 and highlight the importance of reflecting age and gender related differences in the netnographic sampling frame (study 2).

The majority (70%) of respondents could remember YouTubers talking about health topics and just under half (47%) had used YouTube to look for advice on health related topics. Females were 2.4 times more likely to look for health advice than males and more likely to remember and search for advice on mental health, wellbeing and body image related topics. Males were more likely to recall and seek risk behaviours such as drugs, alcohol and smoking. This largely reflects European survey data which suggests that young females tend to deal with health issues in a more internalizing or emotional way with higher prevalence of mental health and weight related issues whilst males tend to engage in more externalizing or expressive health behaviours such as drinking, cannabis use and sexual activity. Although it is important to note that these gendered differences do appear to be converging in many Western European countries (Inchley *et al.* 2017).

Age related differences in health advice seeking were also observed with those aged 16 and over significantly more likely to seek advice and recall mental health, body image and relationship content. This aligns with Livingstone *et al.*'s (2014) pathway, with older teens seeing the emotional lines between their online and offline interactions become blurred as they deal with more serious risks. The quality of communication with parents also declines and time spent with peers and social media use tends to increase as teens age (Inchley *et al.* 2017). During this key period of identity formation and transformation of health risks,

professional YouTubers could be a particularly relatable source of health information. They represent an amplified version of teens own socially networked lives (Beer 2008; Uhls and Greenfield 2012). Through social media, young people's lives are persistently searchable and replicable and have the potential to reach a wide, public and often invisible audience which can seem unfamiliar to the adults concerned with their welfare. YouTubers may, therefore, seem more familiar and relatable than adults offering health advice (boyd 2008). This issue will be further explored qualitatively in study 3.

Differences in recall and seeking of health advice according to health status were also found. Those reporting bad health were more likely to both recall and seek advice on health risk behaviours and recall body image and illness/health condition related content. This could be attributed to what has been termed internet "health habitus" (Bourdieu 1990), which highlights that while young people can be viewed as active and empowered users of YouTube health information, the type of health information they access and how they make use of it is also framed in their broader social identity including socioeconomic status, health lifestyle and digital inequality (Lewis 2006; Hale 2013). An interesting example of this is that those reporting bad health in this study were significantly more likely to recall content on illness/health conditions perhaps reflecting their own health experiences. Research on health based YouTube content suggests that user generated content on health conditions is more popular and tends to be both more sympathetic and accurate when compared with conventional media, for example Wong et al's (2013) study of epileptic seizure content. However, these studies also highlight that YouTube content, particularly in relation to risk behaviours, generally contain poor quality health information and counter official sources through sensationalised messages (Kim et al, 2010; Lewis et al 2012; Manning, 2012; Paek et al, 2013; Yoo and Kim, 2012, Wong et al, 2013). This highlights both the need for a greater understanding of the health related content produced by YouTubers (study 2) as well as the growing importance of digital media literacy.

Self-reported confidence in seeking health related information on YouTube and in performing a number of critical assessment tasks were relatively high. Interestingly, participants were less confident in identifying YouTube information endorsed by NHS or health charities compared with those that are commercially sponsored. Social media remains underused by

national and local government public health departments with limited reach, failure to foster interactivity and scarce evidence on effective interventions (Fry and Neff 2009; Thackeray *et al.* 2012; Chou *et al.* 2013), so this reduced confidence level may simply indicate that the participants were less likely to encounter NHS endorsed content. While positive confidence in assessing the quality of YouTube health content was relatively high (48.2% had a high confidence score), 15% of young people were not confident to perform any of the critical assessment items and two thirds were not confident to perform all five. This suggests that progress still needs to be made to improve young people's ability to identify trustworthy online health sources (Bartlett and Miller 2011). This is reflected in an increased focus on digital media literacy on both national (House of Lords 2017) and international (Bulger and Livingstone 2013) policy agendas

Young people's confidence in critical appraisal is lower among those who engage with YouTuber health content. Young people's odds of a high confidence score in relation to the critical appraisal tasks were higher among those who had not seen YouTuber health content (OR=1.61, $p<0.05$) or sought health advice on YouTube (OR=2.2, $p<0.05$). However, as this question measured young people's confidence and not their performance of these tasks, this relationship is difficult to interpret. Young people engaging with YouTubers may be doing so because they are less able to identify accurate sources of information on YouTube. However, conversely, one could argue that those who have viewed YouTuber health content are more aware of the complexities and nuances of YouTuber produced health data thus resulting in a lower confidence score than those who have never viewed this information. It is also important to note that there was collinearity between this confidence score and age, and so to some extent this score could just be a reflection of young people's increase in skills as they mature (Livingstone 2014), with younger participants both more likely to have a low confidence score and more likely to watch YouTubers. This issue warrants further exploration from a young people's perspective and will be explored qualitatively in study 3 (chapter 6).

Limitations

The sample for this survey was largely of white ethnicity and recruited from a single county in the North West of England where mental wellbeing and IDCAI scores were worse than the

national average. A large proportion (79%) of under 16s in the sample were male, making it difficult to independently assess response differences according to age and gender. Schools recruited to the survey were self-selecting resulting in a potential selection bias (Olsen 2008; Till and Matei 2016). In addition, school recruitment may have created an implicit obligation to participate among participants (Barbovschi *et al.* 2013). Measures of health behaviours, social media use and YouTube use were all self-reported which may have resulted in recall bias or satisficing responses (Krosnick 1991; Olsen 2008). In the absence of a validated scale of social media literacy for young people, a scale was developed based on an adult e-health behaviours survey (Chen and Lee 2014). While the scale had a high reliability (Cronbach's $\alpha = .827$) the pilot did not seek to explicitly measure face validity. (Lavrakas 2008). Due to the limitations of this sample, it is therefore not possible to come to any conclusions about the reliability or validity of this scale for future research.

4.4: Conclusion

This study is one of the first to address health information seeking and literacy specifically in relation to YouTubers and give some initial idea of the recall and active seeking of these health messages among young people. As Livingstone et al (2014) argue, young people's progression through online risks and opportunities are influenced by the interaction between their social development and the affordances of particular social media. This study illustrates that YouTube provides a clear source of health advice for a substantial proportion of young people recruited from a school sample. It is not, however, possible to make any firm conclusions about the positive and negative impacts of YouTube on young people's health. This study has also highlighted some differences in these health seeking behaviours in relation to gender, age and health status which could prove useful in the design and piloting of YouTube based health interventions. The survey provides useful baseline data but does not allow any firm conclusions about the nature of the health related content produced by professional YouTubers or how this information informs young people's own behaviours in relation to health. The research will go on to explore these issues through the next three qualitative studies in chapters 5,6 and 7.

Chapter 5: Netnographic study of YouTuber health content (study 2)

This chapter presents findings from a netnographic study of the videos and associated comments of seven UK YouTubers. The study objective was to examine the way that health information was communicated by these YouTubers. The data collection procedures are described, followed by the findings from a thematic analysis of these videos. Lastly, a discussion of the wider implications of these findings is presented.

5.1: Methods

As previously described in chapter 3, this study was not a netnography in the truest sense due to the covert nature of the data collection. However, it drew on the five steps of netnography described by Kozinets (Kozinets 2002; Kozinets 2015): *entrée*, ethics, data collection and analysis, providing trustworthy interpretation and member checks which are detailed below.

Entrée

Sampling

Seven UK YouTubers were selected to be included in the study based on responses from the school-based questionnaire (study 1). The sampling frame was guided by young people's responses rather than by the researcher as this posed the risk of objectifying young people's YouTube use according to the researcher's own priorities (Heath *et al.* 2009) rather than listening to what young people themselves have to say about their lives (Stephen and Squires 2003). Participants were asked to select which YouTubers they watched from a list of the 50 most subscribed in the UK and through a free-text response. This resulted in a list of 356 YouTubers which were ranked according to the number of responses. Due to the gendered differences in YouTube viewing habits, health seeking and recall observed in study 1, the ranking was then sub-divided by male and female participants.

Initially, the top three YouTubers for both male participants and female participants were selected for inclusion in the final study. One YouTuber (YT2) featured in the top three for both

genders, so this resulted in five for initial inclusion. However, only one of these five YouTubers was female. Study 1 found significant differences in health information seeking and recall on YouTube between males and females, which aligned well with gendered differences in adolescent health behaviours observed in wider European surveys (Inchely et al, 2017). For example, females in study one reported higher prevalence of internalising behaviours including mental health and weight related issues while males reported higher prevalence of externalising behaviours such as alcohol and drug use. It was therefore felt important to include both male and female YouTubers in the study sample to capture these health-related differences and so the next two highest-ranking females were included in the sample, resulting in seven YouTubers. All of the included YouTubers were ranked in the top ten and watched by over one third of respondents. Table 5.1 below provides full details of the sampling process.

Table 5.1: Sampling frame for YouTubers developed from responses to study 1

YouTuber code	Selected by	Rank	Proportion watching	Health content Ranking*
YT1	Females	1	51%	1
YT2	Males /Females	2(M), 3(F)	54% (M), 37% (F)	9
YT3	Males	1	65%	18
YT4	Males	3	45%	2
YT5	Females	2	43%	37
YT6	Females	6	43%	13
YT7	Females	10	36%	4

*Questionnaire respondents were asked to give examples of YouTubers they could recall talking about health content through a free-text question. This resulted in a list of 288 YouTubers which were ranked according to the number of responses. As only 359 respondents provided an answer to this question it was not used to determine the sampling frame, however the ranking has been included in this table for illustrative purposes

Once the seven YouTubers were selected, time was taken to become familiar with their channels and their audience. Kozinets (Kozinets 2002; Kozinets 2015) describes learning about the community of interest as an important part of the entrée stage. Selected sites should have high traffic, large numbers of discreet posters and high levels of between member interaction to generate descriptively rich data which are relevant and focused towards the research topic (Kozinets 2015). Each YouTuber had over 1 million subscribers which indicated high levels of traffic and each video had between 300 and 74,000 comments suggesting good levels of

viewer interaction and the potential to produce descriptively rich data. Data on each YouTuber is summarised in table 5.2.

Table 5.2: Summary of YouTubers included in the sample

YouTuber code	Gender	Age	Channel Type ¹	Number of Subscribers ²
YT1	Female	27	How to & Style	11 million
YT2	Male	28	Comedy	58 million
YT3	Male	24	Entertainment	17 million
YT4	Male	21	Entertainment	5 million
YT5	Male	23	Entertainment	8 million
YT6	Female	28	How to & Style	4 million
YT7	Female	32	How to & Style	3 million

1. YouTube allows content creators to select a category for their videos from a predetermined list. The data above is the most common category for the creators last ten uploaded videos
2. Number of subscribers rounded to the nearest million at time of data collection (July-December 2017)

Screening

A full list of videos produced by each YouTuber was collected from their channel using the University of Amsterdam Digital Media Initiative YouTube Data Tools (Digital Media Initiative 2015). The tools extract data from YouTube using the YouTube Application Programming Interface (API) version 3. The video list module downloaded data as a tabular file for each of the seven YouTubers with 21 fields (including the video title, description and category, the number of views, likes, dislikes and comments). To identify the data which were most focused and relevant to the research topic (Kozinets, 2002), each video title was screened against pre-determined criteria (as described below) to establish whether the video discussed health related topics. For YouTubers who had less than 1,000 public videos (n=5), all videos were screened while for those with more than 1,000 public videos (n=2), the most recent 1,000 videos were screened.

The definition of health used in the screening criteria, as with the school-based questionnaire, was relatively broad. As early as 1986, the World Health Organisation (WHO) in their report on Young People’s Health, caution against a “pure health” definition for young people. Adolescence is as a key period of health transition during which physical changes occur alongside psychological development, identity formation and relationship development in the

context of societal factors. WHO argue that health issues cannot be separated from these wider, related issues. Classification of health should therefore recognise that young people are not a homogenous group but differ in relation to factors such as gender, age, ethnicity and social and environmental circumstances (World Health Organisation 1986; World Health Organisation 2004) and take into account young people's perceptions of health issues (Royal College of Paediatrics and Child Health 2011).

Research on young people's health perspectives often focuses on pre-defined topics such as smoking, alcohol and sexual health rather than young people's own frames of reference (Spencer, 2012). Research exploring young people's perspectives highlights broader health views and concerns including happiness, confidence in their abilities, looking good, relationships with others and having fun (Armstrong *et al.* 2000; Spencer 2014). In the UK, young people's health policy has also begun to move beyond "traditional" risk behaviours to recognise newer emerging risks (including social isolation, loneliness, nutrition, body appearance and sleeping disorders) and young people's priorities (Cabinet Office 2014; Hagell and Coleman 2014; Coleman and Hagell 2015). For example, a recent YMCA interview study with young people revealed their top five health concerns were mental health, self-confidence, body image, diet and nutrition and physical activity and sports (YMCA. 2016).

For this reason, a broad view of health was taken when screening video titles as defined in table 5.3. These same health topics were included in the questions on health content recall and seeking in the school-based questionnaire (study 1). Video titles which included any of the topics listed were selected for inclusion. Where there was any ambiguity over the video title, the researcher viewed the video and made a decision based on the video content. In total, 3,882 videos were screened and 133 were selected for inclusion in the study based on the screening criteria. The number of videos screened and selected for each YouTuber is provided in table 5.4.

Table 5.3: Health topics from study 1 used as screening criteria for study 2

Risk behaviours	Wider health and wellbeing
Smoking Alcohol Drugs Sexual Health	Illness or health condition Mental Health Fitness/ Exercise Food/Healthy Eating Body Image Relationships Confidence Friendships

Table 5.4: Results of video screening 1

YouTuber	Number of videos screened	Number of videos selected	Total video time in minutes
YT1	340	20	304.59
YT2	1000	21	282.28
YT3	1000	13	99.22
YT4	300	16	92.35
YT5	297	19	174.21
YT6	478	18	259.6
YT7	467	26	281.26
Total	3,882	133	1493.51

Ethics

Ethical approval for this study was granted by Liverpool John Moores University Research Ethics Committee (17/PBH/017, 24/05/17). The ethical decisions involved in this study were previously outlined in detail in chapter 3. In short, due to the public nature of the video content, consent was not sought to include videos and comments in the study. However, to protect from harm, YouTubers were allocated a code and their names, channel names and any personally identifiable data was removed from the transcripts. To protect commenters, usernames were removed, and quotes included in the thesis were searched for in three search engines (Google, Bing and Yahoo). If quotes were found through this search process, minor words in the quotes were reworded until the quote was no longer retrievable.

Data collection and analysis

Data collection

Selected videos were imported into NVivo (version 11) using the NCapture data tool between July and December 2017. Between 300 and 1,500 comments were captured for each video according to the parameters set by the NCapture tool. The way in which the tool determines the number of comments captured per video is unfortunately unclear. According to the NCapture user guide *“The number of comments that you can capture is determined by YouTube. The exact number may vary depending on the number of comments available. For popular videos with numerous comments, you will only be able to capture the most recent comments”* (QSR 2012). Alternative options for capturing all comments on each video were explored; for example, the DMI (2015) ‘Video Info and Comments’ module allows users to download the comments from each video individually and export this data to excel. However, due to the volume of comments on the selected videos, it was decided to continue using NCapture to reduce the number of comments to a manageable level. As Kozinets (2002) argues, due to the easy and plentiful nature of the data available in netnography, the researcher must let both the research question and the available resources guide which data to pursue.

Data analysis

As Pink (2007) argues, there is no single way to analyse multi-media data, instead the choice of analysis method should be informed by the overall research question and methodology. In this study, videos were transcribed verbatim and both the transcripts and video comments were analysed using thematic analysis (Braun and Clarke 2006). As Pink (2007) claims, just because we are collecting data online does not mean we have to develop new visual methods. We can use the same methods of analysis to understand our participants online and offline lives. However, Paulus et al (2014) caution that *“analysis of recordings has typically... involved converting the media files into some form of textual representation (through transcription), and rarely, if ever, includes going back to the audio or video sources during the analysis process”* (p142). To address this, videos were transcribed verbatim using the synchronised

playback feature in NVivo so that the videos and transcripts could be reviewed together during the analysis process (Paulus et al, 2014). The researcher also kept notes on the subtext, pretexts and their personal reflections during the data analysis process (Kozinets 2002) and where appropriate this is indicated in the analysis. As Braun and Clarke (2006) argue, transcription is an important, interpretative stage of familiarising oneself with data during which meanings are created.

Thematic analysis (Braun and Clarke 2006) was chosen because it is a well-established method within health and wellbeing research. It allows robust and sophisticated analysis which can be presented in a way that is accessible to those outside of academia including practitioners and policy-makers (Braun and Clarke 2014). The flexibility of thematic analysis (Clarke and Braun 2013; Braun and Clarke 2014) meant it could be used across all of the qualitative studies making it easier to triangulate the findings, particularly as the selected triangulation protocol (Farmer *et al.* 2006) involves the convergence of themes. The analysis followed the six phases described by Braun and Clarke (2006): familiarisation, generating codes, searching for themes, reviewing themes, defining and naming themes, and reporting.

Step one: Familiarisation

The thematic analysis process began with familiarisation which involved “active reading” of the video transcripts and comments to search for patterns and meaning framed around the health topics described in table 5.3 (Braun and Clarke 2006). During this process, the data was also reviewed to identify if it was “on-topic”. Kozinets (2002) describes this as an important stage of netnography due to the sheer volume of data collected. It must take place before the coding process to reduce the dataset to a manageable level. On-topic is defined by Kozinets (2002; 2015) as the data most relevant to the research question. On-topic data was identified using a deductive (or top down) thematic approach (Braun and Clarke 2006).

Three deductive themes: 1) sharing health experiences, 2) giving health advice, and 3) communication of health beliefs, opinions and social norms, were developed following familiarisation with the data and informed by the responses from questionnaire study (study 1) and conceptual framework (chapter 2). As previously discussed in chapter 4, young people had frequently encountered YouTubers health experiences and sought health advice and this

varied according age and gender suggesting social norms played a part in their engagement. These deductive themes also reflect the intrapersonal, interpersonal and organisational factors identified in the conceptual framework. Data originating from the transcripts and comments were coded separately into two child nodes (YouTubers & commenters) under each of these three deductive parent nodes.

Step two: Coding

Once the process of familiarisation and identifying on-topic data was complete, each of the three broad themes was re-read and notes were made manually on potential codes and patterns. These notes were then reviewed to create a list of initial inductive codes for each broad theme. Separate lists of codes were generated for the video transcript data and for the data from comments. All data were coded systematically to these codes.

Step three: searching for themes

The codes from each deductive theme were then sorted and grouped using a mind map to create a series of themes and sub-themes. Separate themes and sub-themes were created for the video transcript data and the data from comments. Nodes were created for these themes and sub-themes in NVivo and the data was recategorized.

Step four: reviewing themes

The list of themes was then refined. A single mind map was created for the video transcript data and comment data respectively (see figure 5.1 & figure 5.2 below). At this stage, codes and themes were reviewed across all three deductive themes and were collapsed to develop a thematic map which reflected the meanings evident in the dataset as a whole.

Step five: defining and naming themes

The themes were then refined, defined and theme names identified. Care was taken to ensure that each theme told a detailed story that reflected the research study objective. Sub-themes were used to give structure and establish a hierarchy of meaning within each theme. The two mind maps for the video transcripts and comments were reviewed together and

commonalities and dissonance across the two sets of themes identified to create the most coherent and logical structure for the narrative.

Step six: reporting

The results of the thematic analysis (section 5.2) present an analytic narrative which addresses the study objective of examining the way health information is presented by professional YouTubers. As Braun and Clarke (2006) recommend, vivid verbatim examples have been used to capture the essence of each theme and allow the reader to see the validity of the analysis. Quotes are labelled using the numeric code for the YouTuber and video (for example YT1-1).

Figure 5.1: Thematic map for YouTuber video transcripts

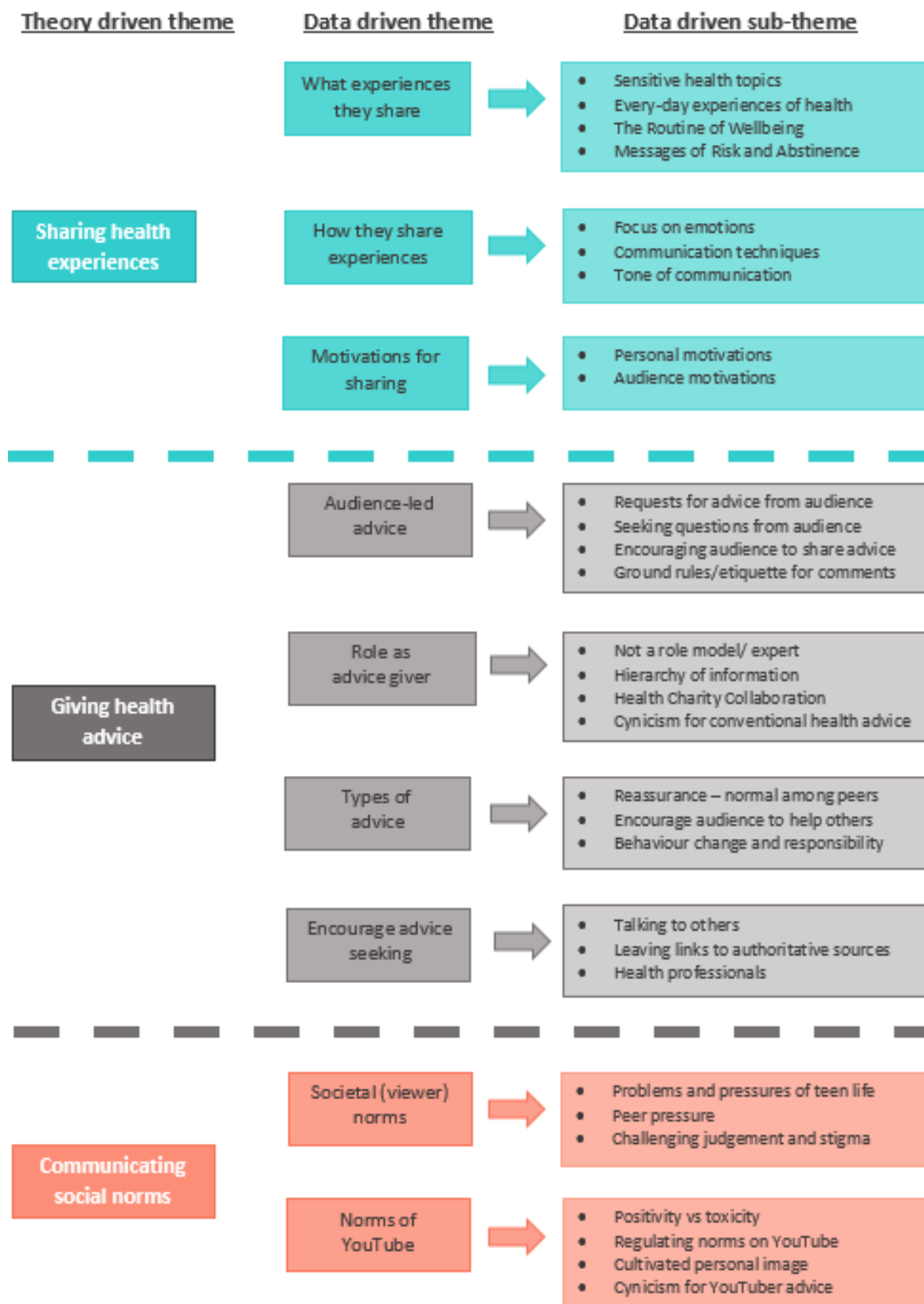
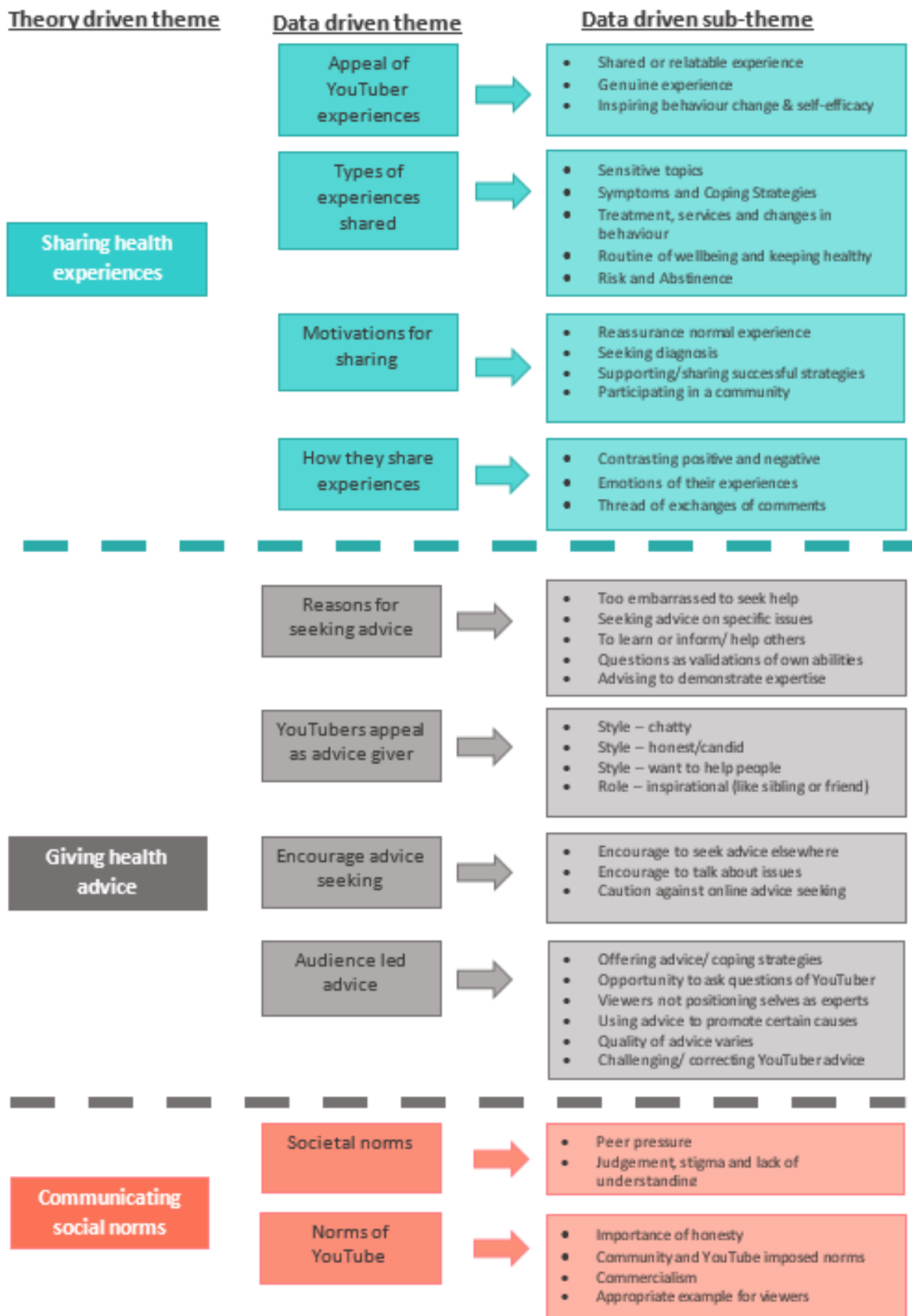


Figure 5.2: Thematic map for video comments



5.2: Results

The seven YouTubers included in this study had been on the platform for a considerable amount of time (between 6-10 years) and each had an extensive back catalogue of videos (minimum 297 videos). In accordance with Abidin's (2018) definition, this study focused on "anchor" content (planned content usually uploaded to a schedule) rather than "filler" content such as vlogs which were often housed on a secondary YouTube channel. It was clear from the videos analysed that as each YouTuber had built themselves as a brand, their main channel content had changed from a more amateur style to a more carefully curated and professionally filmed product. This issue and the implications for YouTuber health content is explored in greater detail in chapter 7.

The volume and nature of the health content produced by each YouTuber varied considerably. Six of the seven YouTubers produced content that directly discussed health-related topics and three of the YouTubers (YT1, YT4, YT5) had a diagnosed health condition (anxiety, depression and Tourette's syndrome respectively). Moreover, all seven of the YouTubers produced content that shared their experiences, opinions and attitudes towards a range of health topics including risk behaviours, physical activity and nutrition. Three overarching themes were identified from this health content, which reflect this diversity; YouTubers used their channel to: 1) share their health experiences, 2) to give advice on health-related topics and to 3) communicate certain social norms in relation to health.

This study also analysed the comments left by viewers beneath each selected video and these comments were equally diverse in their discussion of health-related topics. Thematic analysis highlighted that this communication mirrored that of the YouTubers with the comment section providing a space in which viewers could share their health experiences, seek and offer advice and communicate certain norms in relation to their health. Some viewers used the comments section to ask questions and respond directly to the YouTuber while others sought responses from fellow viewers. Many of the comments showed characteristics of community participation with threads of comments, questions and responses, debate and discussion all present. The guidelines and norms of interaction for these communities were

influenced and, in some cases, clearly prescribed by the YouTuber and then governed by the commenters themselves. Despite some differences in the complexities and nuances of YouTuber versus commenter discussion of health-related topics, the broad thematic agreement across the two datasets points to an important feature of this content. YouTubers are not simply producing static health content, which their audience receive passively. Rather their audience play an important role in responding, contributing to and in some cases guiding the health content produced. For this reason, the analysis of comments and video transcripts have been presented side by side in this chapter to create a rounded narrative of YouTuber health content.

Sharing Health Experiences

YouTubers and commenters use these videos to talk about every aspect of their personal experiences including symptoms, treatment and accessing services and changes in behaviour. Common across this content is the personal element of these experiences that are described in simple terms and within the context of their everyday lives. This section gives a broad overview of the types of health experiences YouTubers shared, their motivations for sharing and the techniques they employ to do so. It then considers which aspects of YouTubers shared health experiences are particularly appealing to their viewers.

What experiences they share

Sensitive health topics

Sensitive health topics such as mental health (6 YouTubers) and sexual health (2 YouTubers) were the most common content produced. Topics discussed included anxiety, depression, self-harm, Tourette's syndrome, pornography, sexual debut, contraception and body confidence. YouTubers' mental health content often had an air of disclosure as they share mental health experiences they had not previously discussed. As illustrated in the quote from YT4 below, this disclosure appears an effective way of creating intimacy and trust between the YouTuber and audience particularly if they shared this experience. This may be particularly powerful when addressing topics which are seldom discussed due to potential

embarrassment or stigma. The comments from viewers included alongside the quotes below praise the YouTuber for addressing a potentially embarrassing topic (YT4) and providing reassurance to younger viewers (YT7), both of which will be discussed in detail later in this chapter.

Right, now boys and girls. Today I'm here to talk about something that I have suffered with my whole life. I've never really, I guess, had the balls to mention it on YouTube before. But who gives a shit, let's do this right. So pretty much 6 months ago, I was diagnosed with depression. YT4_16 (Male)

Yo guys! So today, we are talking about porn. Alright, yes we are. Now I will say now, warning! This video is not going to be suitable for everyone but without further ado. YT4_11 (male)

I'm impressed that you would admit it. Most people can't or won't. They are too ashamed, but it can be a problem Commenter (Male)

Safe for doing this, probs helped quite a few fellas by doing this vid Commenter (Male)

So let's face it. Sex is sex. It can feel awkward to talk about it to our friends and family but there's no need to be. Let's face it every, well a lot of adults do it, animals do it, your mum and dad did it -sex...I had lots of comments about contraception, it wasn't necessarily a question. But lots of people who answered my questions when do you think it's right time to have sex or that kind of stuff. They all said use contraception and I agree! YT7_12 (Female)

It makes me feel better hearing that because I'm going to secondary/high school this year and I'm afraid of that stuff Commenter (Female)

I'm a pretty nervous person when it comes to this sort of thing so it's great to have a person like [YT7] explain sex Commenter (Female)

Risk and Abstinence

The YouTubers also discussed a range of health risk behaviours including excessive alcohol consumption and drunkenness, occasional reference to recreational drug use and risky sexual behaviours. The majority of this content appeared to be made with the sole purpose of entertainment, in contrast to the sensitive health topics where the YouTubers' intentions also appeared to be to inform or raise awareness. There were clear gendered differences in the portrayal of risk behaviour content with males more likely to present content that pushed the boundaries of acceptable behaviour, while females were more often seen practising moderation or abstinence. As an example, one female YouTuber (YT1) made numerous references to her decision not to drink alcohol whilst male YouTubers made multiple casual references to drinking at a young age, drunkenness and hangovers. Male YouTuber content was more likely to normalise risk behaviours through a competitive or challenge element (for

example, “Are We Gonna Survive Drinking This? 100-year-old Whisky” and “Making Drinks in VR and Drinking them”) or humour and parody (\$1 Coke vs \$100 Coke challenge¹¹).

The quotes below from two YouTubers, one male and one female, have been chosen to illustrate the contrasting ways in which YouTubers portray gendered expectations of risk behaviours. In these examples, YT3 (male) and YT7 (female) are discussing contraceptive choices. In the first example, YT3 is “Reading Old Messages To Girls”, a common convention where YouTubers reveal personal conversations from their phone or social media. The second example from YT7 is a “Story-Time” about taking the morning after pill. The Story-Time is another common YouTube convention that involves the telling of embarrassing or personal stories. Both of these types of video are prone to dramatization and exaggeration. They often make use of clickbait titles¹² and primarily aim to entertain. Despite these similarities, there is a clear difference in the male and female YouTuber’s discussion of sexual risk with YT3’s lack of concern about the consequences of using no contraception reinforcing certain expectations of masculinity. Whilst for YT7, her story is more focused on the anxiety and embarrassment associated with negotiating effective contraception.

Alright. So obviously this was back when I had it raw. This was when I did not give a fuck. I was like yes, I will go with this chick raw. Because it feels good. I don't care about STDS, I don't care about babies, I'm going raw.
YT3_10 (Male)

Like this is Storytime but I don't want it to be too graphic or involved, we were having some time with each other and it was all going very well...He finished his time and he, backed away, out and looked down and said the two words that no-one wants to hear. He went, "oh no". I was like "what?"... He was like "oh, I don't know where the condom is". Now I am like a stickler for contraception and I was like, this is condom every time please. YT7_2 (Female)

From a health promotion perspective, these differences have interesting implications as they suggest viewers of female YouTubers are more likely to encounter messages about moderating risk behaviour. In contrast, those who are viewing male YouTubers are more likely to be encountering regular references to health risk behaviours such as excessive drinking, drunkenness and unsafe sex. The comments below demonstrate that these portrayals of risk

¹¹ In this video the YouTuber parodies a common convention among YouTubers which involves comparing cheap and expensive versions of various items (typically food, fashion and cosmetics). In this sketch the YouTuber compares the effects of drinking a bottle of coca cola with consuming a large quantity of (fake) cocaine.

¹² Clickbait is an internet term describing “content whose main purpose is to attract attention and encourage visitors to click on a link” (OED, 2019). On YouTube, this will generally involve sensationalist or exaggerated titles and thumbnails designed to encourage viewers to click on the video.

behaviours can reinforce certain aspects of the viewers' own identity. In the first two quotes, male viewers of YT2 describe how his drinking and smoking is something they respect and shows *"we'd have a lot to share"*. In contrast, the quotes from female viewers of YT7 empathise with the embarrassment associated with taking the morning after pill and praise her decision as *"being responsible"*.

I'd love to have a drink and a smoke with you, [YT2]! I feel like we'd have a lot to share
Male commenter, YT2_1 (Male)

Damn [YT2] I respect you more today than ever before. I just wish I could afford to drink the same alcohols you do. Male commenter, YT2_1 (Male)

It's a funny story to hear. And a good example of being responsible, I think. You could have not gone for the pill and not had the story but gotten pregnant. So thank you for sharing your experience with us!
Female commenter, YT7_2 (Female)

I had to super awkwardly send my friend in to buy the morning after pill before it was available on the shelves, not my proudest moment but it's okay because it was still being safe and that is what's important.
Female commenter, YT7_2 (Female)

The everyday routine of health and wellbeing

YouTubers frequently discussed routine health practices including physical activity, food and diet, and wellbeing practices such as coping with stress, friendships, relationships and improving confidence and happiness. In this content, the boundaries between the "commercial sphere" and "community sphere" (García-Rapp 2017) is blurred. Often what appears to be a YouTuber's personal experience is part of a sponsored brand campaign or includes product endorsement. Following new rules introduced by the Advertising Standards Agency (2016) social media influencers including YouTubers are now required to make any paid-for-advertising obviously identifiable to their audience (for example through use of #ad or similar). However, there is no clear standard for what obviously identifiable advertising is and the methods of disclosure chosen by YouTubers in this study varied considerably. This is reflected by an announcement from the Competition and Markets Authority in 2019 that 16 celebrities (including YouTubers) had pledged to improve their disclosure practices (Competition and Markets Authority 2019). In addition, these regulations only apply to videos

produced after the introduction of the regulations so disclosure is far less common in videos produced before 2016 (which are still viewable).

In the example illustrated by the first quote below, YT6 who has been sponsored by a Lifestyle App (which tracks physical activity, diet and water consumption) clearly discloses sponsorship verbally and also has the word “ad” appear in the corner of the screen each time the sponsored product is mentioned. However, these practices were variable across the seven YouTubers and, unlike in the example below, it was rare for them to use multiple methods to disclose sponsorship. Among the most frequent sponsorships were high calorie or high sugar drinks and foods such as soft drinks or chocolate cereals, health foods and protein powder companies, and self-tracking apps for both physical activity and wellbeing. In the second quote below, YT7 discusses the benefits for her as a YouTuber working with coca cola as it allowed her to have a higher filming budget and thus increase the quality of the content she produced.

I've been using an app called LifeSum [word ad appears in bottom corner of screen] to help me track my exercise and my water intake to keep me on track and really, it just keeps you motivated because you're logging it every single day. And LifeSum actually approached me and asked me to try out their app, tell them what I thought about it and if I liked it then feature it in a video. And I actually really, really liked it so, and it has been helping me stay on track and all that kind of stuff so I thought I would show you it.

YT6_15 (Female)

I worked with coca cola once, and from the budget, I was able to pay for a cameraman and an editor and I had little props and lots of things going on which I wouldn't normally do for these videos. So, it actually enables me to make something really exciting in terms of content and then keep the rest of the money. YT7_13 (Female)

Alongside these brands, there were several examples of female YouTubers collaborating with cosmetics brands to produce content that promoted aspects of wellbeing such as stress relief and self-care. The final quote below is an example of this taken from a video called “Little Ways To Change Your Life” (YT1). The video lists a series of activities to achieve a healthy lifestyle including: gentle exercise, eating a healthy breakfast, drinking enough water and reducing screen time. The video is sponsored by a skincare brand to endorse a new campaign and the quote illustrates how the skincare product is seamlessly incorporated into the healthy lifestyle narrative.

So, we all know that skincare plays a natural part in having great, natural looking skin but another important thing which a lot of you also actually pointed out in the comments in the last video, is having a healthy lifestyle... I have friends, who are very healthy, and they do a lot of exercise and you can really tell. And it really does benefit their skin...So once your morning skincare routine is done and you're feeling a little bit more fresh. Then I think now would be a good time, if you wanted to, to try some gentle exercise. Now I know it is quite important to do gentle exercise and since I left school, I definitely haven't been doing enough of it.

YT1_11 (Female)

Even in cases where YouTuber health and wellbeing content was not sponsored, the neoliberal language of individualism and consumer capitalism continued to dominate. For example, wellbeing videos, often branded as self-care, on issues such as managing stress or improving confidence often move quickly from an emotional focus to practical solutions including disconnecting from social media, spending time outdoors and creating a calming and clean living space. These practical solutions were often simultaneously presented alongside material aids to wellbeing such as candles, beauty and skincare products, and calming or meditation apps. This is illustrated in the first quote below, where YT6's tips on de-stressing quickly move to recommend a particular cosmetics brand. Similarly, physical activity content was often linked to brands of sports clothing (as illustrated in the second quote below) and individualised forms of exercise such as yoga, exercising at the gym and running, with very little mention of team sports. YT4 observes in his own video on physical activity *"It does seem the gym is becoming a really increasing thing... in our lives now"* (YT4_8, Male) and perhaps in part can be explained by an increased focus on individual responsibility for health alongside the commercial influence of gym and sports brand companies. The impact of these neoliberal notions on YouTubers health content is explored in detail later in this chapter.

"if you're feeling stressed and overwhelmed to just get out so yeah going for a walk. Bubble baths I just love. I love aromatherapy associates sleep oil, to go in the bath. So at the moment, the other day I used L'Occitane and it really, really made me sleepy. I used their foam bubble bath and I used some of the relax oil, so I double dosed on that and it was really, really good."

YT6_10 (Female)

"And here's what I'm wearing for my yoga session. I'm wearing a Nike sports bra, this Nike erm vest top thing. It's got a racer back. Erm, and then I think my leggings are from Sweaty Betty, they've been in the vlog before."

YT6_17 (Female)

Motivations for sharing experiences

From the analysis above, we can conclude YouTubers are producing a diverse range of health content and this, in turn, suggests that their motivations for doing so were varied and complex. In the case of sponsored content, YouTubers motivations will be largely financial while in the case of entertainment content, they will be motivated by engaging and maintaining their audience. However, there remained numerous examples of the YouTubers in this study sharing their personal health experiences without sponsorship and these motivations appeared to be either personal or to benefit their audience. YouTubers personal motivations included: their interest or emotional connection to the topic discussed, the benefits of talking through their experiences, a personal decision to change their behaviour, or a desire speak out about a health condition. For example, in the first quote below YT1 describes how going “*through a really horrible time*” with her mental health prompted her to discuss her anxiety. The remaining two quotes, both from YT7, accompany sponsored content by Weight Watchers and a cancer charity collaboration where her motivations for collaboration were a desire to lose weight and a personal bereavement from cancer respectively.

Then a couple of months ago, I went through a really horrible time. And it is not something I like to think over very much. Over the last few months, I decided to take a completely different outlook on life. I just sat here on day and I was like, this is not what I want to be like. A few months ago I wasn't even; I was barely even doing anything... I was just like one day: "no, I don't want to be like this anymore". You can't let panic or anxiety change the way you do things. Because you get one life. YT1_20 (Female)

I've been trying to get really healthy because I have a high BMI, I fill my body with a lot of really bad food. I want to be able to run around after my daughter and run around with my friends and not be out of breath. And I just want my insides to feel clean and nice because a lot of the time before I started these things I'm doing, I felt really tired and like sluggish, And I was like, why do I feel so tired, I've had enough sleep. And the reason I felt so tired was because I wasn't giving my body the nutrients and the fuel that it need to get through the day. YT7_14 (Female)

And you think that cancer goes when someone dies. It doesn't. That cancer stays in the family forever. Even though I don't have cancer, I still live with cancer because cancer took her. When somebody's gone for a really long time, they become like a myth or an urban legend, or they're not real. Like when I talk about my mum, like I don't know what she sounds like because I haven't seen her for 22 almost 23 years. I can't remember the sound of her voice. YT7_16 (Female)

YouTubers often framed their health narratives in terms of positive benefits for their audience. YouTubers felt sharing common experiences with their audience presented a range of benefits including: raising awareness, encouraging them to seek help, reassuring,

normalising their experiences and increasing their confidence and motivation to change a behaviour or cope with a health condition. In the quotes below, YT2 seeks to reassure audience members struggling with their mental health telling them “*it is common to feel this way*” and that “*better days will come*”, while YT4 tells his audience they should not “*suffer in silence*”. YT5 uses his own experiences with Tourette’s syndrome as a teenager to raise awareness of the condition and address stigma. In a number of cases, the YouTuber explicitly denied any personal gain associated with their health content. For example, YT1 described the discomfort she felt talking about her personal experiences of anxiety on camera. “*So I’m going to sit here, regardless of the fact it makes me feel extremely uncomfortable and it’s not something I enjoy sharing with hundreds of thousands of people. But I am going to do it anyway*” [YT1-20].

I want you to know that it’s ok [laughs]. It’s common to feel this way and everyone goes through different emotions throughout their life. And there’s nothing wrong with that and there is nothing to be ashamed of. Like I said, I’ve struggled with thoughts myself and especially being younger. And er, for what it’s worth, I think pulling through, you’ll be stronger for doing it. And no matter who you are, life is worth living and better days will come - I promise [laughs]. YT2-13 (Male)

But yeah, rather than just hide it [depression], boys and girls I’m telling you. But I just am. Now this is such a big thing, like so many people suffer in silence with this sort of stuff and if you think it would be worth it, do let me know if you would like me to make a video on this topic. Erm, because I am willing to. YT4-5 (Male)

As I said in the beginning of this video, I’m not making this for myself. I am no longer suffering from this disorder. It’s in the past for me, but it’s not in the past for a lots of people. Between 0.4-3.8% of kids aged 5-18 suffer from Tourette’s syndrome. Let’s just say this video gets 500,000 views, I’d say about 6,000 of those would come from people living with Tourette’s... And that’s why I’ve made this video. I haven’t done it for your entertainment. I’ve done it because I want to ask you to do me a favour. Next time you’re put into a position where you’re given the opportunity to make fun of somebody with Tourette’s or any other disorder, I ask that you don’t...Also don’t give them sympathy, they don’t want that. Everyone just wants to be normal. I also truly believe that if everyone understands just a bit more what others are going through the world would be a better place. YT5-13 (Male)

YouTubers’ sharing of their personal health experiences appeared to prompt those commenting to also share their experiences, and much like the YouTubers their motivations appeared to be either personal or audience related. Commenters’ personal motivations included seeking reassurance that their experience was being faced by others and, particularly in the case of mental health, seeking preliminary diagnosis or confirmation of their symptoms. Commenters seeking reassurance often gave detailed descriptions of their experiences, reaching out to either the YouTuber or fellow viewers for reassurance. This often

prompted comment threads to form where viewers shared common aspects of their experiences with one another.

As illustrated in the quotes below, some appeared to use their comments to gauge if their symptoms were serious enough to seek medical advice. Others claimed the YouTuber helped them recognise their symptoms could be indicative of a mental health condition. As one viewer discussing depression puts it *“sometimes, it's hard to tell if you have it. If it's been raining for every day of your life, you have no concept of weather, as there is only one state. You never think to question it [Commenter, YT4_16].* Commenters discussed the barriers to seeking diagnosis most frequently due to embarrassment, fear of accessing health services and encountering disbelief. Some seemed to indicate the individual had been clinically diagnosed; however, a significant proportion appeared to have self-diagnosed for example through online quizzes. There did appear to be a high level of awareness of the dangers of self-diagnosis and considerable cynicism for those who diagnosed themselves online even among those who were self-diagnosing, as illustrated by the final quote below. However, this does suggest there is a risk that young people, who can recognise their symptoms in YouTuber content, may not always be prompted to follow this up with a health professional.

I'm not sure if I have it, I'm kinda nervous to post this but I might delete it later, I get sweaty and nervous when I'm going out myself, like people will judge me, I hate paying for things or ordering things unless I'm with someone, I lose my breath when there is to many people around me. There's more but I'm not wanting to say more, please someone comment if I do [have anxiety] or not. Commenter, YT1-12 (Female)

I don't know if I have depression or not, but I don't want to ask to go see because my mother will be like "Oh don't be soft." if I asked to go to the doctors to go see, I'm generally in a neutral mood but most of the time feel a little down. But if I asked my mother to go to the doctors to see she will think I'm stupid and being ridiculous. I just assume I don't have depression, I'm 13 btw that's why I can't really go to the doctors on my own. Commenter, YT4-16 (Male)

I believe I have depression... I don't know if it's just ME convincing myself to think that I have depression or what...I took a quiz if I had depression and it said I did. Even though u can't really trust the internet I kinda feel like it may be true. Commenter, YT1-12 (Female)

Commenters sharing their experiences also appeared to be motivated by a desire to help others. Similar to the YouTubers, they shared their own emotions and experiences to reassure others, inform on the practicalities of accessing treatment, suggest coping strategies and encourage others to seek help or change their behaviour. Below is an example from a female

viewer who describes her own experiences of self-harm, how she successfully sought support and treatment, and to encourages others to do the same. To some extent, YouTubers did cultivate these exchanges among their audience by encouraging them through their videos to discuss the health issues raised in the comments section (illustrated by quote below). However, it is noteworthy that on most occasions the YouTuber is largely absent from the comments section, with the discussion among viewers largely self-governed. The comments section of these videos therefore provide a quite undefined source of health information for young people. The YouTuber producing the content (particularly when this content is in collaboration with a charity or health organisation) lends a measure of authority and authenticity to the online space. However, unlike in more traditional online health forums, there are no designated roles as moderators or peer mentors (McCosker, 2017). This is illustrated in the final quote below, where a number of young viewers attempt to give advice to a commenter who has expressed suicidal intentions. There appears to be no mechanism to flag such comments or signpost individuals towards appropriate sources of support.

There is no one way to give up, in my own experience, tell someone you truly trust, for example a teacher, parent, sibling or friend, and talk it out with them, go to a guidance counsellor or even a therapist, I personally went to the hospital and got referred to a therapist and put on medication. It takes a long time to give it, so don't expect immediate results, if you are feeling the urge to harm yourself, go for a walk or talk to somebody you trust, play with a pet if you have one, if not maybe ring a friend or family member. Don't try to push yourself too quickly as that can overwhelm you and make the urge to self-harm even stronger, pace yourself and take it one day at a time. If you slip up occasionally don't feel like it's the end because everybody makes these mistakes when girls. I know this is long winded, and I'm not sure how well these tips will work for you as I'm only speaking from personal experience, but I hope at least one of these tips can help you! ♡ (ps, remember you're not alone) Commenter (Female, YT7_18)

There is a lot more to people than you might realise and sometimes life is hard for people and I just hope that this video has either comforted you in the knowledge that someone else is going through the same thing or has even help you realise that what you're experiencing is panic or it's helped you to help someone else or if it's in fact helped you to stop panicking. That would be absolutely amazing but please er leave comments in the comments section below. And reply to each other's comments. This is a good opportunity for people to write things out and for other people to reply and to get involved with each other and help each other. YT1-6 (Female)

Commenter 1: You're young please hang on you have a lot to live. I know how you feel, I thought and still think about suicide and tried to commit it once... I know it's hard, I know it probably seems impossible to continue living but try and talk to people you really think will believe you, as I read you don't have a good relationship with your family, maybe a teacher or people that felt the same way as you and can understand you. Please don't put your life in danger. I'm 16 and started having depression and suicidal thoughts since I was your age so I understand.

Commenter 2: I'm not going to let you die. I'm in the same situation and I'm not going to let you go down. Talk to me if you feel rough please

Commenter 3: You're not a horrible person, you just wrote your current feelings down on a YouTube comment. Nothing wrong with that mate, you're fine. (YT4-16)

How they share experiences

A key characteristic of YouTubers sharing of health experiences is their focus on the emotions, doubts and worries associated with their experiences. As discussed above, this may be pertinent for young people who feel they are misunderstood by other potential sources of support such as family, friends or healthcare professionals, particularly if the YouTubers' emotions are similar to their own. The data points towards two potentially successful aspects of this emotion focused sharing of experiences. Firstly, YouTubers overtly recognise that young people's feelings can be complex, contradictory and change over time. In the example below, YT1 describes her experiences of anxiety as a teenager. She recognises the tension she felt being unable to go out with friends but still feeling she was missing out by not going. Secondly, YouTubers are honest and open about the emotional impact of their personal experiences and on some occasions include visible displays of emotion such as crying or losing their temper on camera. Expressions of emotion on camera are a powerful way for YouTubers to demonstrate not only their commitment and passion for the health topic but also practice authenticity through their performed vulnerability. This is illustrated in the example below, in which YT7 struggles to hold back tears as she discusses a parental bereavement due to cancer.

The worst part of it for me was that I couldn't go not that I didn't want to go. If that makes sense? That I felt like I couldn't not that I didn't want to. So, I would be at home knowing they were all on a night out and they were all like having a fab time and I wished more than anything I could be there but I knew I couldn't be. And it was, that was quite a hard time for me actually. That was probably in my later teens. That's something I knew I had to deal with. That's not something my friends had to deal with. YT1-1 (Female)

...and that was really upsetting because [tearful] because that was my mum and she had lovely brown hair and it was very thick and lovely. And then it was all gone, and she just started to look really, really tired. I'm going to stop filming if it's getting to much actually. No, I'm just going to cry and tell you the story. And she looked really tired all the time. And then she moved to [city name] general hospital and I thought that she was going there to get better because that's what you do. You go to hospital to get better, and my dad visited all the time... YT7-16 (Female)

As a result, the comments section appears to be a place where viewers are comfortable sharing the feelings associated with their own health experiences. The comments demonstrate the complexity of their feelings and often coincide with periods of change in their lives such as parental divorce, bereavement, moving house or changing school. As illustrated in the quotes below, viewers use strong emotive language and often quite

powerful metaphors to communicate their worries, doubts and feelings. This suggests that these comments could give viewers the time and space to reflect and communicate their experiences in a way that would not be as easy in physical conversation. Numerous comments suggested viewers struggled to discuss their feelings with family or friends due to feeling overwhelmed, embarrassed or that their experiences will be dismissed as trivial.

Manic depression is brutal. The only way to explain it is... (the extreme positive side) You enthusiastically take your car to bits to fix something. Then you have a good old swing on the mood swing you have in the garden. The next day you just boot the nuts and bolts all over. Commenter, YT4-1 (Male)

I feel trapped in the dark and I can't move I feel hatred and guilty as if I did something that everyone knows what I did but I don't and I try and try to make up for it but I can't because I don't even know what I am making up for...I don't know how to tell anyone. My mam and dad don't even know how I feel and I was soo close to them but ever since I started feeling like this I have keep everything inside and trapped myself in my room...
Commenter, YT4-6 (Male)

However, there were gendered differences observed in YouTubers' tone of communication and use of emotion. Female YouTubers rely heavily on their personal experiences and emotions, appearing cautious about generalisation. As illustrated by the quote from YT7 below they mainly use the first person, frame their views as personal experience, openly acknowledge diverse views and recommend their audience should make up their own mind on what action to take. In contrast, male YouTubers appear more assertive in generalising experiences and opinions. The quote from YT4, which discusses the pressures of gym culture, is completely devoid of first-person experiences, with the YouTuber instead presenting a general narrative based on his views. Male YouTubers also appear to make use of more varied narrative techniques to make their experience relatable. Both YT3 and YT4 introduce a competitive element to their physical activity; citing quantitative data such as max reps and daily step counts. YT3 goes as far as to encourage his viewers to compete with him directly via Fitbit. Several make use of fictitious sketches to communicate their messages, often starring an exaggerated version of themselves and making use of their editing skills to play multiple characters at once. For example, YT4 acts the role of 17-year-old Sullivan (who appears in a number of his videos) to present his personal experiences with pornography in a more generalizable and less personal way.

A few people have asked me what I think is best, to have a few sexual partners and experience various sexual things or save yourself 'til marriage? And the way that I look at it is that's entirely your choice. It's up to you what you decide to do. I know what I did and I know what I would want to do if I redid everything but I do think that is entirely up to you...Because obviously if you do experiment and do all the things you do and then in 5 years' time say oh I wished I'd saved myself then you'll be kicking yourself so my advice on that one is don't let me to tell you what to do. YT7-12 (Female)

...if you get too obsessed with being the biggest, the most great looking, er the you know you're not going out with friends, you're not eating things you might enjoy eating, you're essentially sacrificing the rest of your life just for other people who don't give a fuck, you know? ...In reality guys right the number one person who cares how you look, right, is you. Is your mate Dave gonna be like: "[name] right, your biceps are half a centimetre smaller. I am not being your friend anymore. Yeah, go, go away" He's not going to do that is he? YT4 -8 (Male)

These gendered variations in sharing health experiences could suggest that emotionally focused health content appeals more to female viewers while more generalised health messages are more appealing to males. However, it may also point to another important variation in YouTuber audiences that has not been mentioned thus far. Some of a YouTuber's audience will be regular subscribers who watch their content frequently and identify with the YouTuber on a personal level (Burgess and Green 2008; García-Rapp 2017). In contrast, others will be casual viewers who have encountered the YouTubers content due to relevant search terms present in the video key words or title. In general, personal and emotionally focused content is appealing to sustained subscribers as it maintains their sense of connection and intimacy with the YouTuber in question (Abidin 2018). In contrast, a more generalised message will be more wide reaching and could appeal to those who are casually encountering YouTuber health content. Data collected from the video comments is insufficient to fully explore this issue but this is explored in detail in study 3. However, the comments did highlight some generally appealing aspects of YouTuber health content that is explored in further detail in the section below.

Appeal of YouTuber experiences

Viewer comments suggested three aspects of YouTuber health experiences which were particularly appealing: they were relatable, appeared genuine or authentic and were perceived to increase viewer's self-efficacy to change their own health behaviours.

The most commonly mentioned appeal was that viewers could relate the YouTuber's health narrative to their own experiences and this was particularly common for mental health topics such as anxiety, panic disorders and depression. Numerous commenters highlighted specific

details from the YouTuber's experience such as treatments, services, or experiencing symptoms in a particular place (e.g. panic attacks in the home or on public transport) as particularly resonating with their own experiences. As previously discussed, viewers reported feeling they weren't alone in their symptoms and experiences, encouraged to seek help or comforted because they were unable to discuss their experiences with others.

As illustrated in the first quote below, some commenters were reluctant to seek help or had been met with disbelief or misunderstanding from family and friends. There was a sense that commenters and YouTuber were "*getting through this together*" (male commenter, YT4_1) with commenters taking inspiration from YouTubers ability to cope with their health conditions. This is illustrated in the second quote below, where YT5's success despite his Tourette's syndrome appears to increase the confidence of a viewer with the condition. Interestingly, there were also several instances (as illustrated in the final two quotes below) where viewers had not necessarily related to these experiences on first viewing but had returned to the video when something similar had occurred in their own lives, suggesting these videos can act as an ongoing source of support.

Since this is the only account, my friends/family wouldn't see this... I'm 16. I've been suffering from anxiety since when I am 13 I believe? I haven't gone to doctors before, my parents don't know about it, my friends sort of know it but I don't really wanna tell them... I just don't want them to see me in a different way and it's so hard trying to explain what's wrong with me. I don't want them to think that I am "doing" this to gain attention ...Watching [YT1] and reading your comments really cheered me up and gave me hope. I don't really know why I am writing this, I guess it all just gets a bit too much on my own. Commenter, YT1_20 (Female)

...as someone with Tourette's....I always worry that it won't get better, that I'll always be hindered by this, that I'll never be able to have a relationship, because I'll never want to tic freely around someone. But the fact that you have suffered through the same syndrome and managed to come out of it so successful, confident and content, seriously puts my mind at ease. Commenter, YT5_15 (Male)

I remember watching this 2 years ago not knowing anything about anxiety and here I am watching this again after having an anxiety attack Commenter, YT1_12 (Female)

The thing is year ago when this came out I didn't get it (don't get me wrong I watched porn) but now as a 14 year old I found myself in fucking weird places uno Commenter, YT4_11 (Male)

For other viewers, the YouTuber's perceived authenticity was appealing. In some cases, this was visually verified by being able to see a change in the YouTuber, for example improved body confidence or weight loss (illustrated in the first quote below). In other cases, this sense

of authenticity came from the YouTuber disclosing something sensitive (for example sexual health in the second quote) or for the first time such as a diagnosed mental health condition (final quote below). However, audience perceptions of authenticity appeared fragile and frequently contested. There were several occasions where viewers identified contradictions in YouTubers' health behaviours and discussed the issue of authenticity. Inconsistency in YouTubers' health behaviours and messages could have important implications for health improvement and this issue of compromised authenticity is explored in detail in section 5.2.3 below.

I can totally see a difference in how you look in the past couple weeks! Your face seems a little slimmer I think. You look incredible and make me want to get a trainer!! Commenter, YT6_15 (Female)

Oh my god I laughed so hard! I LOVE how natural and not afraid you are to talk about these things. It is so pleasing to see you, a strong happy woman talk about sex with so much confidence. It even gets to the point, for me, that it makes you even more trustworthy you know? Commenter, YT7_19 (Female)

I love how open you are about everything...I never thought someone so happy would have depression but it just shows how little people really know about YouTubers when there not filming themselves.
Commenter, YT4_16 (Male)

Finally, several commenters appeared to believe that YouTuber health content had increased their self-efficacy to change their own health behaviours. They felt the content had made them reflect on their current habits (for example diet, physical activity, mental health) and a minority had been prompted to seek advice from a health care professional. Others self-reported a short-term change in their health behaviour and that they had returned to the content for inspiration when they were having difficulties sustaining this change. As illustrated in the quotes below, commenters mentioned feeling increased confidence, self-esteem or general wellbeing.

I watched this video last year and I wanted to say yes to lose weight! I weighted 86 kg last year, and my confidence was so low, a lot of people were like picking on me because I was bigger, and I just didn't love myself. But then after I watched this video I used summer 2013 as my remake and I just wanted to try to see if I can make it and I did! I lost 17 kg since last year and now I weight 69 kg, I look so much better, my confidence and self-esteem are improving, Commenter, YT1_16 (Female)

I have been trying to get over all this anxiety for so long but I decided just now to make an appointment with my GP and just face it. I don't think I can deal with it on my own anymore because it's getting worse and worse. I haven't gotten my license yet even though everyone else has theirs, because of anxiety. Does anyone have any advice on how they managed their anxiety better? Commenter, YT1_20 (Female)

Giving health advice

Types of advice

When a YouTuber informs or advises their audience, it tends to be interwoven into a narrative of their personal experiences with scant examples of YouTubers defining terms, describing symptoms or discussing treatment options. Their health advice often uses simplified terms and colloquial language to make it more accessible to their audience. This is illustrated in the quote below where YT1 uses the metaphor of a car alarm to help define anxiety disorder. As was touched on above, advice is often framed around the neoliberal notions of individualised coping strategies and personal responsibility for health and related behaviours.

Another thing, I think I said this in my previous video, is that the anxious people are like car alarms that go off from a little gust of wind or a leaf and everyone else are the cars in the street that need a good battering before the alarm goes off. Erm, that's how I like to describe it. So if you're an anxious person you're that car that has a very sensitive alarm. And if you're the kind of person who has anxiety when you meant to have anxiety erm so basically your alarm goes off when someone is actually smashing into the car then that's completely normal. YT1-12 (Female)

Coping strategies and treatment

Recommended coping strategies generally came from YouTubers' own experiences and rarely ventured into discussing clinical interventions or treatments. In the vast majority of cases, they focused on practical strategies which viewers could implement themselves to improve their physical health or mental resilience. These included improved diet, increased exercise, breathing techniques, sufficient sleep, mobile apps to relieve stress and dressing to improve body confidence. In the first quote below, YT1 talks about some of her coping strategies for anxiety where the key to success is "to keep your body in a good place". On the few occasions where treatment is discussed, YouTubers did attempt to raise awareness about the range of intervention or treatment options available (as in the quote from YT7 below discussing contraception) and present a balanced view of decision making discussing both benefits and side effects (as in YT4 and YT1's quoted discussions of treatment for depression and anxiety respectively). However, it is important to note that none of this advice appears to have been checked for accuracy and in the mental health treatment discussion each YouTuber frames their own preference for medication (YT4) and Cognitive Behavioural Therapy (YT1) in a more

positive light. The advice from YT1 is followed up by the final quote below in which she goes on to describe a negative experience with her GP and concludes, “*maybe I just need to deal with this on my own*”. These findings suggest that on some occasions YouTuber not be completely aligned with health professional advice.

Erm, enough sleep. I always find with er anxiety, if I don't have enough sleep I can have a particularly anxious day the next day. Eat well, drink well. Erm, you just want to keep your body in a good place. 'Cos then if your body's in a good place then your mind's in a good place. YT1-20 (Female)

Go and have a look at what contraception would suit you best if you are thinking about having sex and you haven't sorted that out. There is an array of choices. Thing that you can use, things that he can use or if you're a boy watching this, things a girl can use. Thing that both genders can use that will stop or at least help avoid unwanted pregnancies and STDs...Be sensible and protect yourself. It's not just the boy's responsibility to carry contraception. It's yours as well, it takes two to tango, that old chestnut. So do look after yourself, please, please! YT7-12 (Female)

But yeah, now you have a better idea of what depression is, I want to talk about how you can treat it. Now, one thing you can do is go and see a therapist. Talk things through you know, let her get inside your brain. However, like I've spoken about, this isn't something I can react to and feel better about. It's ingrained in my skull. The alternative is to take a medication. Now pretty much all the medications for depression are effectively the same in that it just balances out the level of Serotonin in the brain so that it operates normally. It's not a stimulant. It's not just like a drug that's making you go all happy. It's filling in the job that the brain's not doing naturally. Now obviously, it's not just a matter of popping the pill and letting it do its magic. Firstly, it takes like two months to kick in, secondly, you have to work really hard to try and be more positive. It's a slow process. You have to have a plan. The medication is allowing me to be myself. Without being anchored down by negative emotions. However, there are side effects. For example, no sex drive, erectile dysfunction, putting on weight, loss of energy, and let me tell you. On the first medication I was on, pretty much all of them happened. So I got it changed to another one and luckily none of them seemed to be happening YT4-16 (Male)

There are so many different things that you can do to solve panic attacks. There's pills you can take for anxiety. There are beta blockers and things to slow down your heart. I didn't really want to go straight into the medical route because that kind of terrifies me. But when I went there I hadn't got anything from it and I started looking at private places to go. It was very expensive. And I looked a hypnotherapy. We were looking at lots and lots of different things. And I tried things from like Boots and Superdrug, you know the calming things, and none of that stuff really worked. YT1-20 (Female)

I decided to go to the doctor and speak to, I just went to my local GP. They were really unhelpful. Erm, kind of disheartening after so long. You go to the doctors and just think ok, they're going to sort me out. It will be fine. And they made me feel really crap and after that I guess I just felt worse. Because then I felt like well maybe there isn't something wrong with me and maybe I just need to deal with this on my own. If the doctors can't give me anything. YT1-20 (Female)

Behaviour change and personal responsibility

As the focus on individual coping strategies described above suggests, the prevailing tone of YouTuber advice was encouraging viewers to take responsibility for changing their own

behaviours. All three female YouTubers shared their own attempts at improving their fitness and diet, discussing their motivations for behaviour change and practical steps they have taken (for example eating habits, the frequency and intensity of exercise). As illustrated in the first quote below, this content communicates both successes and setbacks and acknowledges that regular viewers can follow them and see the outcomes of their behaviour change first hand. The YouTuber's aim when sharing these changes appeared to be to increase their viewers' self-efficacy to engage in positive behaviour change. This included direct calls to seek diagnosis and professional help (as in the quote from YT4 on depression) and a wider dialogue that focuses on increasing resilience, confidence and a positive mind-set. As already discussed above, there are gendered variations in the way in which this advice is given with gentler, emotion focused female advice quoted from YT1 below tending to normalise feelings of insecurity among young girls, while the direct male advice from YT4 normalises a confident male persona.

But basically I think I have had like a month or so where I was just really not motivated to eat healthy and that kind of thing and then the last month. So this is the good news! The last month I have just really got back on track, just been really consistent. I'd say about six weeks rather than a month. Yeah, I'd say about six or seven weeks. I've got myself to a place which is the best I've felt in a really long time and I'm really excited to film this video today because I am really keen to show you guys my tips and how I did it. YT6-15 (Female)

Even if everyone says to you oh you're being stupid, it's nothing, you have to take a bit of an initiative in this. And if it is something you are genuinely concerned about, you go and see a doctor by yourself. You don't always need your mummy or someone like that to give you approval. YT4-16 (Male)

And I guess the reason that I am doing this is just to say please don't let anything control your life. Be that a person, if there's a person in your life who is affecting your mental health or there not helping the situation. Be that you actual anxiety, be that stuff you worry about every day or panic attacks, or depression. Don't let it control you. YT1-20 (Female)

Now, it doesn't matter if you're not like a confident person in general. But you have to be confident about your actions - does that make sense? I think it does. Decisive, Yes! So yeah, we've established that you need to give your energy to the girl to feed off. YT4-4 (Male)

Encourage advice seeking

It was common for YouTubers to direct their audience to health advice outside of their online community. YouTubers often signposted to more authoritative sources of information by providing links in the video descriptions. They also encouraged their viewers to seek professional health advice and talk to others about their health problems. YouTubers shared

their positive experiences of seeking advice as a means of encouragement, acknowledged that seeking help can be difficult especially for younger viewers and reflected on their own difficulties in doing so and how they overcame them. As quoted below, commenters also tend to echo these signposting practices; some even warned other viewers to exercise caution when seeking advice from YouTube.

Erm, I'm going to leave links to places below where you can read up on it below. Because obviously I'm not good at talking about this sort of thing. I just know from first-hand what it feels like. So I am going link a few links below so that if you guys think that you might have anxiety or you might just be a more nervous person or you might be a bit worried erm all the information will be down below and you can just double check. Because I think it can be very easy to be nervous about something and then instantly think that they have anxiety disorder which isn't the case at all. I think a lot of people get nervous about big things so erm yeah links below. Check them out. YT1-12 (Female)

...but seriously that is the first step alright, If you think anyone you know or yourself has depression, anxiety or any mental disorder. It took me speaking with every family member about 47 times before I actually went and saw a doctor about it. YT4-16 (Male)

As a person suffering from an anxiety disorder, I can tell you guys that the absolute worst thing you can do about your anxiety is sit around, watch YouTube videos and get advice over the internet. Most anxiety relief videos and tips and tricks don't work and seeing that they're not effective can only make you even more anxious. You need to get a therapist and start working on yourself with their help. Commenter, YT1-20 (Female)

...But when people say they need help there's not a lot we can do to be fair. Go see a doctor or therapist; it will help a lot more than strangers on YouTube Commenter, YT7-18 (Female)

Role as advice giver

When giving any kind of health advice, the YouTubers were very careful to distance themselves from an expert (as in the quote from YT2 below) or role model (quoted from YT1 below) position and state they were only talking from personal experience. This perhaps underlies YouTubers concerns about misadvising or causing harm to their viewers alongside the pressures of protecting their brand and public identity from criticism. YouTubers perspectives on this issue are given fuller attention in study 4. However, it was clear from this study that despite deliberately distancing themselves from an advice-giving role, commenters frequently referred to YouTubers as role models. YouTubers were frequently described as being like an older sibling, close friend or parent figure. Contrary to YouTubers' concerns about expertise, these comments appeared more likely to relate to the YouTubers' persona. As illustrated in the quotes below, commenters frequently referred to how relatable

YouTubers were their common experiences and their perception of YouTubers having a genuine desire to help their audience.

And er, I hate to make it seem like; I am the only one who knows this thing and I am the only one who has the right answer because that's not true at all. I can only speak from my experience pretty much, and that's what I'm going to do. YT2-10 (Male)

Now, I am in no way a role model for this. My lifestyle definitely isn't the healthiest. I have friends who are very healthy and they do a lot of exercise and you can really tell... But recently I have been trying a little harder to make that extra effort. Whether that's been exercise, healthy eating and I've also been trying to drink a lot more water. YT1-11 (Female)

Thank you for sharing your feelings, for years you have been like my big sister as you have always been there for me and you're such an inspiring role-model. Commenter, YT7_20 (Female)

Everyone loves YouTubers so much because they're like celebrities we can relate too much more, and I've always thought that was kind of fun, and it was nice to know someone else understood. But the level of connection I have to this is something different entirely, because I grew up with Tourette's too Commenter, YT5-15 (Male)

In acknowledgement of their lack of expertise, YouTubers frequently signposted their viewers to other sources of health information through links in the video description. The quote from YT7 presents a particularly promising example of this practice. After being prompted by her audience to make a video on self-harm, she felt insufficiently informed about the topic and so visited a charity to learn more and produce a video in collaboration with them. There were also a number of videos in which YouTubers had been approached by health organisations or charities to work in collaboration. Usually these videos involve communicating key health or campaign messages or participating in charity fundraising campaigns. For example, YT6 & YT7 were ambassadors for the United Nations Global Goals campaign, YT5 & YT7 visited Comic Relief projects and YT7 collaborated with Sports England for their “This Girl Can” campaign. It was notable that this content tended to be slightly more scripted in tone, presumably due to a combination of guidance from the organisation (as illustrated by the quote from YT6’s collaboration with the United Nations) and more careful preparation of the content by the YouTuber (as discussed by YT7 below in relation to a video for Cancer Awareness month).

I realised, after reading all your points and comments, that there was so much that I don't actually know about self-harm. So I decided to make an effort and find out a bit before I made this video because I didn't want to make a video that had no basis or a bit flimsy. Especially talking about something that is so close to so many people's hearts. So I...went to visit a charity and talked to them and learn a little bit more. That's right, I actually went outside the space in which I film my videos, erm so that I would learn something. YT7-18 (Female)

So this is going to be a little bit of a different video for me today. I've been working with an incredible project called the Global Goals. If you haven't heard of the global goals yet, I would really like to tell you some more about them because I would love that if you could feel as passionate about them as I do. So, on 25th September at the United Nations, 193 world leaders will adopt the Global Goals. They are a series of 17 ambitious goals to end poverty, fight inequalities and injustice and tackle Climate Change for everyone by 2030. The campaign aims to make the goals famous and push for their full implementation YT6-2 (Female)

Erm, the reason I have done this is because October in England is erm breast cancer awareness month and I wanted to raise awareness for breast cancer and also for all cancers. So this video has quite a serious tone to it and I've actually written most of what I want to say down on my laptop. Usually I just write a few notes but I've actually like written almost, like kind of a script because I haven't touched on this before in videos but I've talked about them, so this video is breast cancer awareness but also for my mum who died of cancer when I was 7. YT7-16 (Female)

Another interesting aspect of these collaborations is regular viewers will not just see the campaign in isolation but often also see vlog footage of the behind the scenes mechanics of these collaborations. The quote below from YT7 shows her giving a speech at a UN event, where she effectively pitches herself and audience as a suitable collaborator. The impact this behind-the-scenes content has on the communication of health messages is unknown. It could have the potential to increase audience ownership of these messages through a feeling of co-production but this remains under researched from a health perspective.

I feel very honoured to be here at the UN and to be supporting such an incredible campaign. To reach 7 billion people, the entire world's population. It seems like an impossible task, but actually in today's world it really is possible. There are just so many ways that we can connect with each other nowadays and the way that I know most about and the way that makes this campaign so different from the Millennium Development Goals is social media. It engages a new and younger audience which are hopefully the audience that will over the next 15 years monitor the goal and ensure that they happen. So that's why I feel so proud and excited to be playing my part and telling people about the goals. So these are just really small things but when you add them all up it means that the goals might just be famous and we might just change some people's lives. Thank you. YT6-13 (Female)

However, YouTubers' attitudes to signposting and health campaigns are not always consistent. On several occasions YouTubers referenced Google as a source of health information, which makes certain assumptions about their audiences' ability to effectively identify accurate online health sources. Furthermore, there were several examples of male YouTubers either speaking critically of health campaigns (as the quote from YT4 below illustrates) or parodying them. In one example, YT2 "reacts" to a number of health campaigns, providing a commentary as he watches them. While watching an US campaign aiming to reduce social smoking among teenagers¹³ he states: "Now I just feel like smoking ok, I don't

¹³ "It's a Trap" produced by truth campaign. Available at: https://www.youtube.com/watch?v=dfeVx_bOzdg

even smoke and I just definitely... OK, let's just move on before everyone starts smoking. It's the only way". Health campaigns that collaborate with YouTubers will sit alongside this content on their channels and this may negatively influence both the effectiveness of the campaign and the YouTuber's reputation of authenticity among their audience.

What is the difference between anxiety and panic attacks? Now, I. Phew that's I hard one. Ok, I'm actually going to Google this because I am not a psychologist. Therefore I don't want to give you any wrong information. YT1-12 (Female)

If you don't know what Tourette's is then I recommend a website called Google. But the way that I'd describe it is that people with Tourette's have very strong impulses to make unflattering movements and or noises. And the longer they try and control these impulses the stronger they get. YT5-13 (Male)

I don't even know how to say it but it pisses me off. Anyways, the second point is, like I say these anti-bullying campaigns. I actually just wanna say a word on these because to be honest, let's face it, those sort of things there all sort of like let's come together and combat bullying, meh, meh. Like, it's almost like they want to be bullying, do you know what I'm saying? YT4-13 (Male)

Audience led advice

YouTubers' teenage audience appear to play a role in shaping the health advice produced with several health videos being prompted by a positive response or repeated request from their viewers. The question and answer (Q&A) video is a common format that involves viewers contacting the YouTuber via multiple social media channels (often using a specific hashtag) with questions they would like answered. This is shown in the quote from YT7 below where she sought questions on sexual health from her viewers to structure her content. This is corroborated by viewer comments where, as also illustrated below, there are numerous requests for YouTubers to make videos on certain health topics, give advice and answer questions.

I get a lot of messages from you bros. A lot of them are really funny, a lot of them are really heart-warming and a lot of them are really stupid. One thing that I notice in a lot of messages that I receive from you bros when you open up about your problems and things that are happening seems to be a lack of confidence. So I wanted to dedicate today's video in hopes to change that. I want you to feel confident about yourself. YT2-3 (Male)

So, surprisingly sex is actually something I'm asked quite a lot about because when I said a while ago I'd like to hear what your problems and issues are. Lots of them were regarding sex. So I went on my Facebook page and asked you what you would like to talk about because you know, sex is a fairly broad topic. There's an array of things we could have chatted about and I just picked a couple of things that came up the most and thought we could address those today and maybe in the future we'll address some other of the topics if this video is well received. YT7-12 (Female)

Yeah man I'd like to hear your depression story or just talk about the topic in a video, because I as well am going through depression. Male Commenter, YT4-5 (Male)

I'm 17 and this video just gave me a whole lot of confidence, I've been in relationships but never have done anything sexual because I didn't have the confidence in myself about my body but also just didn't feel as though I was ready... Would be great if you could do a video about virginity and stuff like that as sometimes I do worry when the "right time is" as a lot of my friends have already done it and sometimes I feel as though they think it's weird that I haven't yet... Female Commenter, YT7-3 (Female)

YouTubers also encourage their audience to use the comment section beneath each video to seek and give advice to fellow viewers. As shown in the quote from YT1 below, this is often framed around the benefits of learning from multiple viewpoints and creating a sense of community among their viewers. As the quotes from commenters below suggest, there was plentiful evidence that viewers were using the comments section for this purpose; offering advice, sharing personal coping strategies and responding to requests for health advice from others. However, the quotes also highlight that the quality of this advice may be variable suggesting the comment section is an additional, unregulated source of health advice that is often overlooked in existing studies of YouTube health content.

Everyone have a little chitchat. Send your reassurances. Ask your questions. There will be a lot of people watching this video who can offer advice so don't be scared to leave a comment YT1-1 (Female)

And that's why, ladies, you need to ALWAYS make sure you use CONDOMS + the PILL Condoms to prevent std's Pill to prevent a pregnancy And if you ever have a situation with the condoms (like [YT7] here), at least you're sure you're not getting pregnant :) Female Commenter, YT7-19 (Female)

Eat like a fuckin MONSTER!!! But healthy food, try not to eat too much sugar or salt! This will help! Trust me! I was in the same situation two years ago, I'm 16 now and I look a LOT better! I'm going to the gym for 3 months now :) u don't need to go to gym now, just do ur favourite sport, (I practiced karate for 12 years btw)... and eat a lot.. These are my tips :) Male Commenter, YT4-8 (Male)

As previously discussed, YouTubers are largely absent from the comments section but some do outline ground rules and etiquette for those commenting. This is almost exclusively a female practice and common rules include cultivating a caring and encouraging community, respecting the views of others and minimising the use of offensive language (quote from YT7 below). On some occasions, they did also place age-warnings at the beginning of videos that covered sensitive topics such as sexual health.

So in the comments I would love to hear your thoughts on this. Please be respectful. Please don't be vulgar and use profanities. Just be, you know, responsible and mature about it. And also respect others and show kindness and love to one another if you are going to be responding and such. Otherwise, I'll have to put them on approval and blah, blah, blah. So let's, let's all be cool. YT7-3 (Female)

And talking of porn, not actually talking about, I'm never talking about porn but what I will say is this video is going to contain some adult topics. So if you are a younger viewer, this might not be the video for you. But I'm going to link three videos below right now that you might like to watch instead of watching this. YT7-21 (Female)

Social norms

Societal Norms

Judgement, stigma, lack of understanding

Commenters frequently mentioned feelings of judgement, stigma or lack of understanding in relation to their health. This ranged from fears they would not be believed or understood to times when they had faced hostility or stigma because of their health and was most common with mental health and body image concerns. As quoted below, many commenters expressed approval for YouTubers talking about stigmatised topics because they felt their reach and influence could raise awareness and challenge misperceptions. This suggests that YouTube might be a frequently used source for young people who are struggling to access advice elsewhere due to fear of judgement. In turn, YouTubers appeared to believe they had a responsibility to talk about sensitive or seldom discussed health topics and this was often framed around wider sentiments of confidence and not being affected by the judgement of others. Often this content takes a myth-busting format in which YouTubers counter common stereotypes, as illustrated in the quote from YT4 below. YouTubers also attempted to dispel certain gendered stereotypes associated with mental health conditions such as self-harm exclusively affecting teenage girls, an unwillingness to discuss mental health among males and certain body image norms for each gender.

I have suffered from anxiety since I was 6, I'm 14 now. It has gone up and down from good too bad to worse and back to good again for as long as I can remember. It is something that I am at times scared to tell people about for the thought of them judging me. Even my closest friends and family can still get annoyed with it at times, which sucks. I wish people would try to understand anxiety more. I'm not asking for them to totally get what I go through but it would be nice if they would at least understand how hard it is for me. Anxiety is a prison cell, the cell door is open but I can't walk to it. Basically meaning that from a logical standpoint, anxiety seems like a very easy crutch to get out of, just tell yourself to stop freaking out right? Wrong. It's not that easy. If it was easy to stop it, I wouldn't have it. Commenter YT1-20 (Female)

It's so important to see more "popular" you tubers talking and spreading awareness about such a serious issue and "stereotyped" thing...I've been depressed for quite a long while, I've never been diagnosed with anything because where I live there isn't doctors, I'm too scared to get in-person help, and many people don't believe me and say I'm "attention seeking". Commenter YT7-18 (Female)

Now, for the people who are trying to help people with depression, I just want to give you a little tip on what not to do.

"Oh, try to feel a little bit better"

Yeah like shit like that -nah! If anything, that just emphasises it. What you want is knowing someone's there. A bit of support, you're not alone. Like life is sick now and it's all because I took them steps to do something about it. Commenter YT4-16 (Male)

A lot of you have questions about what kind of person self-harms or who self-harms? And I think there is a big stereotype that it's girls or teenage girls and certain social groups. But that's not true. It can be anyone and everyone. It can be boys, girls, any age, and any social group. Commenter, YT7-18 (Female)

Peer pressure including pressures of teen life

The comments section suggested that a significant proportion of those commenting on YouTuber content were young people. As quoted below, commenters often discussed the pressures they felt as a teenager to act or look a certain way and engage in certain risk behaviours. These comments were often framed around a lack of understanding from older generations. Perhaps as a consequence, YouTubers often focus on health topics that are particularly relevant to teenagers. They relate their content to their teenage audience by acknowledging the physical, emotional and transitional changes that occur at this time of their lives, attempting to normalise these pressures as something which can be overcome and reflecting on their own teenage experiences. For female YouTubers this also appeared to be an opportunity to present a narrative that challenged peer pressure in relation to risk behaviours.

I really enjoyed this video like... As a teenager I have all of these questions that I just don't know how to answer and I start to feel very anxious, and having someone to tell me that she felt the same way and giving me advice is just amazing. Commenter, YT1-10 (Female)

I literally HATE being a teenager during this society, anxiety and depression has become a trend now rather than an issue? Shout out to the people are actually going through mental issues because it is hard, and sometimes you can't speak to anyone about it because it is now a trend and sometimes you don't even know what is going on. Whether your popular or not depends on how much likes/followers you've got, what phone you have, and whether you drink alcohol at the age of 15. The fact that there's 9 year olds with iPhone now, is just really sad and terrifying for what our future holds. Commenter, YT1-1 (Female)

Erm, and the only sort of like pressure I had really was me in the back of my head thinking "I'm a teen. Like, should I be trying these things? Like, should I be..." It was almost like it was me pressurising myself. I was weird. It was like, well I guess everyone should try something in their life. Turns out you don't really have to because I could see what everyone else was doing and I didn't really feel like I was missing out. Luckily, I wasn't in a group of friends where I felt pressured. Erm, but I know I would have stood my ground and just said "no I'm ok thanks". And I think if you do ever feel that pressure in a group of friends, you have to put your foot down because you'll never look back on that memory of trying something for the first time and feel comfortable about it. Because you'll never be too sure if you really wanted to or not and I'm just not sure that's a nice way to ever do anything. I think everything you do and everything you experience should ultimately be down to you because it's your life. Y11-1 (Female)

Interestingly, the pressures of social media on young people's lives is something that was frequently discussed as an additional arena in which peer pressure and certain expectations of participation and behaviour were experienced. Young people commenting often felt these pressures were not understood by older generations. YouTubers tread an interesting line in this conversation. Social media had a significant impact on their own lives as adults (which is explored in greater depth in study 4) but for many social media had been considerably less influential during their adolescence than it is for their current teenage audience. However, YouTubers' current expertise in social media appeared to place them in a more understanding and knowledgeable position than other adults (as illustrated by the quote from Y11 below) suggesting they may be particularly useful in health promotion which deals with online risks and opportunities.

Social media sucks so much sometimes. It's like you can't escape from your friends, which as someone with anxiety it can be hard. I think I have a lot of reliance on turning my phone off at times and living in the moment! Some of the things that can be said can be so vicious and with the pressures of school and no way to escape it's pretty easy to feel trapped. Idk if I'm the only one that gets this but Commenter, Y11-1 (Female)

I think it's maybe the older generation being in this digital environment and most of them aren't really adept with that form of communication because they didn't grow up with it. Maybe? No one knows fucken anything anymore it's all up in the air. Commenter, Y12-14 (Male)

We both live and breathe social media. Love it. Love it and feel like completely disconnected if I'm not on it. However, there is a downside to it and that is you start to compare your life to everyone else's and start to lose a little bit of reality I think...there are some girls who feel so pressured that every day they need to put up a beautiful selfie. But if you're going to school, you're in your school uniform, you're not allowed to wear makeup and you're just sort of like. I mean you can't look like a model every day...When you see those insta-models, remember they've got teams of people, teams of people. The average person just looks like the average person...Be the average fucking person Y11-10 (Female)

Norms of YouTube

Regulating norms

Alongside wider societal norms, YouTuber health content exists within the context of both YouTube as a platform and each individual YouTuber's community. There appear to be several regulatory forces affecting YouTubers' content including: YouTube's rules on appropriate content, YouTubers' own self-regulating practices, and feedback from their audience. As illustrated by the quote from YT4 below, male YouTubers appeared more resistant to both platform and audience regulation and less likely to impose their own self-regulatory practices. Female YouTubers appeared more likely to feel an ethical responsibility to regulate their content and respond to audience feedback. This is illustrated in the quote from YT7 who describes how her decision to direct younger viewers away from her more mature content goes against a YouTuber's primary aim of accumulating viewers and subscribers. YouTubers' attitudes to regulation may impact their willingness to participate in collaborative health promotion activities, and this is considered in greater detail in study 4 (chapter 7). Vocal audience feedback may also play a regulatory role. As the two examples below illustrate, YouTubers' viewers often debate the suitability of YouTuber health content among themselves.

This video is purely made for entertainment purposes only and not to be taken seriously. If you're easily offended then leave the video now and go watch some other shit to get pissed off at. Alright let's fucking do this. YT3-11 (Male)

Even that feels so against the YouTube way, to tell people to go away and look for something else and come back later because the machine is more views, more subscribers, more everything, more likes. Check me out on this, check me out on that. Like me! Like me! Like me! It's like this giant popularity contest and I feel like I have just been playing it safe for fear of this contest that I'm not the winner of anyway. I'm not the loser, but I'm not the winner. When really, all the advice I give to everyone is be yourself and I am not really allowing myself to be it. YT7-7 (Female)

*Commenter 1: You should not be telling girls they should have sex under peer pressure. That isn't funny or cool
Commenter 2: She's not telling girls to have sex under peer pressure, she's merely saying what happened to her, there's nothing wrong with that. YT7-12 (Female)*

*Commenter 1: Bad example for your young viewers.
Commenter 2: How so? She used a condom, and she used an emergency form of contraception when that failed. Hardly a bad example, unless you're a prude. It's not like she's saying go out and have unprotected sex. YT7-19 (Female)*

The Importance of honesty

As highlighted earlier in this chapter, YouTuber authenticity appeared to be one of the most appealing characteristics of their health content. There is an inherent tension for YouTubers between presenting a realistic depiction of their health experiences and participating in the editing and filtering practices through which they selectively curate their online lives. This is illustrated in the quote from YT6 where she apparently agonises over a continuity error in a fitness video. Given the appealing nature of YouTuber authenticity, maintaining this image creates pressures for YouTubers in relation to their health content and own personal wellbeing. This is explored in greater detail in study 4 (chapter 7).

Comments on these videos suggest viewers are divided on this issue. While some value what they watch as an honest portrayal of YouTubers' experiences others acknowledge what they are viewing is an overly perfect and unrealistic depiction of the YouTuber's lifestyle. This appears to be linked with YouTubers' growing commercial interests and self-promotion, as one commenter remarks, "*Shame you don't make videos like this anymore, you used to be so honest and genuine. Now you're just a brand*" (Commenter, YT1-11). This issue is explored in greater depth in chapter 7.

From a health perspective, commenters were also divided on the impact of authenticity. As quoted below, some felt YouTubers cultivating an overly positive image set unrealistic standards which could be particularly difficult for those with mental health conditions such as depression. In contrast, others claimed they watched YouTube to be entertained and would rather watch a false image that was positive and thus brought enjoyment. The extent to which young people recognise and accept the cultivated and commercialised nature of YouTuber content could have important implications for their social media and health literacy and is explored in further detail in study 3 (chapter 6).

If you're confused as to why I'm wearing a different workout outfit in the thumbnail to the work out outfit that you saw me wearing... The reason is that I was suddenly like oh no, I forgot to get a picture of me in my work out outfit ...So, I was like [name] can you please just come and take a photo of me by this nice pink, peachy/pink wall for me to use in my thumbnail. And he was like, you're not seriously going to put on your sweaty workout gear again that was honestly like dripping in sweat are you? And I was like but I feel like I have to for continuity. And he was like just put on a different outfit and then tell them. So that's what I did. So basically that's what happened guys. I just had to tell you that. I'm like a continuity freak! YT6-15 (Female)

Your positivity-speech REALLY helped me when I was feeling down today, I just really want to say thank you for being so honest about having bad days when others just show off the highlights of their lives making people feel bad. Commenter YT1-10 (Female)

Hah that is just reality, this video just shows the perfection of life not realistic goals Commenter, YT1-11 (Female)

Recently I made the decision to force myself to be happy more often because every youtuber I watched that made me happy was always happy. I started to feel guilty about my negative emotions and kept telling myself that if I were more like them then maybe I could make friends. I even told myself that if these youtubers have the power to make me feel happy for a brief moment then perhaps I have the power to make others feel negative when I felt negative. That made me feel even more guilty. Commenter YT2-8 (Female)

the most people watch YouTube because they had a bad day and feel bad and need some optimism. That's why all youtubers has to fake being happy. Because it's he wants people want to watch. Commenter, YT2-8 (Male)

5.3: Discussion

Study 1 showed high levels of engagement with professional YouTubers among participating young people with a substantial proportion remembering YouTuber produced health content and using YouTube to seek health advice. However, there currently remains little evidence of the type of health content these YouTubers are producing and this study aimed to examine this in relation to the seven most popular YouTubers identified by young people in study 1. In particular, this study considered the key characteristics of YouTuber produced health content, what makes it appealing to the young people viewing it, and which aspects are promising for health promotion.

What are the key characteristics of YouTuber produced health content?

The health content produced by YouTubers included sensitive health topics, contrasting stories of engaging and reducing risk behaviours and a highly commercialised narrative of health and wellbeing. The most frequently discussed health topics were mental health, wellbeing, physical activity and fitness. This largely reflects concerns from national survey data about the rising prevalence of mental health conditions, reduced overall wellbeing and stabilising rates of obesity among young people (Association for Young People's Health 2017; Office for National Statistics 2017). This is accompanied by concerns about “newer” risks for young people such as social isolation, nutrition, body image and sleeping disorders (Cabinet Office 2014; Coleman and Hagell 2015). The health content produced by YouTubers therefore

appears to be an accurate representation of the current issues for young people. As the data included in this study spanned eight years, it might even be a useful tool in highlighting emerging trends in young people's health and informing the direction of future research. However, it is important to note that six of the seven YouTubers were of white ethnicity and the majority appeared, from their discussions of place of residence, parental professions and other factors to be from a middle-class background. Thus, whilst YouTubers health content may align with national trends, it may not always reflect the health behaviours of more vulnerable people.

Many of the health topics discussed were sensitive and often viewers' primary reasons for discussing this online was because they felt uncomfortable or unable to discuss this aspect of their health with family, friends or a healthcare professional. Existing studies recognise that young people often have difficulties accessing traditional health services for a range of reasons including embarrassment, problems recognising symptoms (poor health literacy) and a preference for self-reliance (Gray *et al.* 2005a; Gulliver *et al.* 2010) and this is reflected in the many comments seeking reassurance or diagnosis. YouTubers may therefore be a confidential and convenient source of sensitive health information (Gray *et al.* 2005b) and previous studies have shown this is particularly valuable when discussing topics such as mental health (McCosker 2017) and sexual health (Livingstone and Mason 2015).

YouTubers' motivations for sharing health content appeared complex. Alongside financial and self-branding interests (which are explored in detail in chapter 7), their motivations to make health content appeared to be either due to a personal connection or to provide benefits to their audience. Potential benefits identified by both YouTubers and commenters included awareness raising, encouraging help seeking, increased confidence or self-efficacy and to prompt behaviour change. This altruistic motivation for exchanging health information online can be understood as an example of social exchange theory (Emerson 1976) where individuals exchange information out of a desire to receive something from this contact (i.e. to maximize the benefits and minimize the cost). Yan *et al.* (2016) in their study of a Chinese online health community categorise the benefits of sharing health information according to Maslow's hierarchy of needs which aligns well with the YouTubers' own complex motivations. By sharing knowledge, individuals gain a sense of self-worth, gain face by building an online

persona that highlights their generosity, kindness, rich experiences and knowledge, increase their reputation and increase their social support. We can see numerous examples of YouTubers building their reputation, brand and self-worth in this way, for example, when YT1 states she is sharing her experiences of anxiety despite how uncomfortable it makes her feel. Face concern also appears to limit YouTubers information sharing on some occasions, for example male YouTubers' use of comedy or false personas to communicate health information in a less personal way.

In part due to face concern, YouTubers appear careful to position themselves as not being a health expert or role model. Their content tended to avoid defining conditions, symptoms or treatments and instead was primarily concerned with individual coping strategies and behaviour change, alongside signposting to authoritative sources of information or professional help. This caution appears to be in part due to concerns about misinforming or having a negative impact on their audience's health. Concerns about online health seeking often points to the harm that could be caused through biased, incorrect or incomplete information (Eysenbach *et al.* 2002), although systematic reviews have found very little evidence of direct harm caused by poor quality online health information (Blessell *et al.* 2002). A recent study which reviewed the health information found on three large, forum style websites found that the majority of the information assessed was reasonably good quality (Cole *et al.* 2016) and similarly a review of YouTube content on epilepsy found that user-generated content tended to be more sympathetic and accurate than conventional media (Wong *et al.* 2013).

In addition, YouTubers' caution may also be linked to concerns about their own self-image. YouTubers can often feel under scrutiny and criticism from their viewers (Powers 2015), from the traditional media (Abidin 2018) and legal bodies (Advertising Standards Agency 2016). There are certainly numerous examples in the British press that accuse YouTubers of falsifying or exaggerating their health content¹⁴ or having a negative influence on their young

¹⁴ "Zoella accused of lying about anxiety to boost viewing figures. The Independent. 13/12/2016
<https://www.independent.co.uk/news/people/zoella-youtube-interview-alfie-deyes-a7471456.html>

viewers^{15,16}. This suggests that YouTubers desire to preserve their self-image and distance themselves as role models has important impacts on the type of health information they produce. This warrants further investigation from a YouTuber's perspective and will be explored in detail in chapter 7.

Finally, YouTubers health content also communicated their beliefs and attitudes in relation to wider social norms. YouTubers played one of three roles: 1) reassuring – as in their discussions of pressures from peers and teenage life 2) reinforcing – as in the case of discussions around gender and 3) challenging – for example the judgement and stigma attached to certain health conditions and behaviours. This highlights the ways in which social media can both normalise and create counter-discourse (Mitchell 2017). The way in which young people interact with these narratives has important implications for health content and will be explored in further detail in chapter 6.

What makes YouTuber health content appealing to their young audience?

The appeal of YouTuber produced health information, in comparison to other competing online sources, was their sharing of a relatable, personal experience with their audience in a way that was perceived to be authentic. It was notable among commenters that many felt reassured to find someone who had similar health experiences to them and that this made them feel like they were not alone. One of the most promising aspects of online health communication is that it allows people with common interests to gather together to share health experiences (Eysenbach et al. 2004). A recent study of an online epilepsy community found that 30% of those surveyed did not know someone else with epilepsy prior to joining the forum (Wicks et al. 2012). The YouTubers achieved this by focusing on the emotional impact of their experiences and this encouraged commenters to make similar disclosures. Emerging evidence suggests that using social media for emotional relief in relation to health has a number of potential benefits including self-disclosure, increased emotional support,

¹⁵ "Logan Paul: YouTuber apologises over Japan dead man video. BBC News 03/01/2018

<https://www.bbc.co.uk/news/world-asia-42547699>

¹⁶ "Zoella isn't the perfect role model girls think she is" The Telegraph 28/11/2014

<https://www.telegraph.co.uk/women/womens-life/11259853/Zoella-isnt-the-perfect-role-model-teen-girls-think-she-is.html>

belonging and reduced social anxiety (White and Dorman 2001; Moorhead et al. 2013; Best et al. 2014). Wider evidence also suggests that emotionally charged content is more likely to be shared than neutral content (Berger and Milkman 2012; Stieglitz and Dang-Xuan 2014) and that those who disclose their “true” selves are more likely to form relationships online (McKenna et al. 2002). More broadly, by sharing their personal experiences, YouTubers are successful in creating a sense of community among their viewers built on what Abidin (2018, p32-33) terms “everydayness”, referring to the way in which internet celebrities curate the mundane and ordinary aspects of their lives with insight, candour, consistency and regularity. Sharing their experiences develops a sustained social relationship with their viewers that fosters a sense of community and trust. As like-minded viewers begin to congregate, YouTubers are able to build a stable network with acknowledged membership and so increase their social capital through familiarity and trust with their audience (Bourdieu 1986; Abidin 2018).

It is notable that there were gendered differences in the ways in which YouTubers communicated health messages. Females were more likely to use personal, emotional narratives, while males were more inclined to generalise and use less personal techniques such as comedy and false personas to communicate these messages. These differences suggest that certain YouTuber health messages may be more appealing to certain population groups. The difficulties in identifying commenters’ gender (discussed in the limitations section below) means it is not possible to discern whether these gendered differences in communication appeal more to male or female viewers but this is explored further during the focus groups with young people in study 3 (chapter 6). The appeal of these messages may also differ by type of viewer. Wider evidence on online influencers suggest that more personal, emotional content is more likely to appeal to regular subscribers who already feel a sense of trust and intimacy towards the YouTuber (García-Rapp 2017; Abidin 2018). In contrast, casual viewers who have found YouTuber health content by searching titles or keywords (García-Rapp 2017) will not have this sustained relationship with the YouTuber and so may find a generalised and less personal message more appealing. These differences in appeal according to viewer characteristics also warrant further investigation.

Finally, the concept authenticity, in particular how truthfully YouTubers' share their health experiences and emotions, was frequently contested. YouTubers in this study often appeared to practice what Abidin (2018) terms "calibrated amateurism" which describes the way in which YouTubers rely on social media affordances and tools, vernacular culture and their social capital to create a contrived amateur aesthetic (Abidin 2018). Additionally, it was not always possible for viewers to easily determine whether the YouTubers producing health content was sincere or cynical (Abidin 2017). Interestingly, commenters' views were divided on this issue; some valued an honest, genuine experience and were critical of YouTubers who did not meet these expectations. Others appeared willing participants in this calibrated amateurism who were happy to accept some degree of deception in return for being entertained. From a health perspective, understanding these perceptions of honesty may be important. A large-scale focus group study of young people in the UK and US, found that judgement of the credibility of online health information was tied in with the wider notion of trustworthiness that overlapped with their perceptions of expertise, accuracy and quality (Gray *et al.* 2005a). Young people's views on the credibility of YouTuber health content and the impact this has on perceptions of quality and accuracy are explored in further detail in study 3 (chapter 6).

Which aspects of this content are promising for health promotion?

YouTubers signposting practices appear to be a promising aspect of their health promotion, particularly when this was done through formal or informal collaboration with health organisations and charities. However, despite numerous commenters claiming they had been prompted to seek advice from a health care professional, try the coping strategies recommended or even make a change to their health behaviour, there is insufficient evidence from this study to provide any concrete evidence of YouTuber influence or successful outcomes. Similarly, while the wider literature on social media and online health communities suggests they do improve knowledge and understanding, there is very little evidence of successful behaviour change due to the methodological weaknesses of existing studies (Eysenbach *et al.* 2004; Korda and Itani 2013; Moorhead *et al.* 2013; Laranjo *et al.* 2015). In addition, inconsistencies in YouTubers health messages such as signposting to poor quality information and health collaborations sitting alongside content in which YouTubers

contradict or even criticise health messages may reduce the effectiveness of the health message they share (Erdogan *et al.* 2001). Nonetheless, using YouTubers in a signposting role within wider young people's health improvement interventions or campaigns may be promising.

Secondly, YouTubers were successful in creating a sense of community among their audience. Burgess and Green (2018) claim this is one of YouTube's defining characteristics; as a participatory culture that essentially allows the creation of social networks among core groups of users. Evidence on online health communities suggests that teens are more likely than adults to disclose personal information and display more emotionally emphatic communication online (Best *et al.* 2014). A range of benefits (including social support, opportunity for disclosure, increased self-esteem and social capital, and safe identity experimentation) and harms (including depression, cyberbullying and increased social isolation) of online health communication for teens have been reported but there is a lack of robust evidence to confirm this (Best *et al.* 2014). There appear to be clear similarities between YouTubers' work to develop a community and McCosker's (2017) recent study, which looked at the impact of peer mentors on Beyond Blue, one of Australia's largest mental health forums. McCosker identifies three characteristics which make peer mentors effective as mental health influencers. Firstly, they build demonstrable non-professional expertise by sharing experiences, coping strategies and supporting others in a way that builds trust. They play an active role in framing health by providing evocative, relatable accounts of their experiences, reframing others' experiences in a more positive light and practising empathy. Finally, they facilitate cycles of feedback by structuring engagement, managing relationships and strengthening norms and conventions (McCosker 2017; McCosker 2018). There are uncanny similarities between the characteristics identified by McCosker and the thematic findings from this study.

However, there is one clear difference which must be noted when comparing YouTubers to online peer mentors. The peer mentors in McCosker's (2018) study were ordinary, highly active users who had volunteered as champions within a network of community managers and clinically trained moderators. YouTubers on the other hand are a single, unmoderated influencer who have sustained a substantial following independent of any desire to provide

health information. YouTubers use their audience's input to shape and structure the health advice they give and encourage their audience to share advice with others. Apart from occasionally setting some broad guidelines for interaction, YouTubers are largely absent from the exchange of advice in their comment section. The findings from this study suggest that the quality of health information communicated by commenters was variable and there is no way of knowing how poor-quality advice was perceived by viewers. There were some examples of commenters correcting and challenging what they saw to be inaccurate advice which agrees with the existing qualitative literature indicating young people use sophisticated critical appraisal skills to assess the credibility of online health information (Gray *et al.* 2005a; Gold *et al.* 2012; Fergie *et al.* 2013; Hulme 2015). However, regulation of both YouTuber and viewer produced health advice remains an area for concern.

YouTubers in this study were the subject of some regulation. By participating in the political economy of social media, YouTubers must work within the platform regulations set by Google and are competing for space against transnational media corporations and so their regulatory practices are also caught up in their need maintain visibility, accumulate views and generate profit (Fuchs 2017). However, there were also some examples of YouTubers attempting to self-regulate their own content. This includes incorporating age warnings on their content and setting ground rules for commenters in relation to tone and language. However, these practices were variable and male YouTubers in particular seemed resistant to both YouTube imposed regulation and feedback from their audience on the appropriateness of their content. From a health improvement perspective, this suggests not all YouTubers will be as responsive to collaboration with health organisations, particularly if this restricts the content they can produce.

Limitations

There are several limitations to this study that must be acknowledged. Firstly, the YouTubers selected in this study were demographically similar: all of the YouTubers identified as heterosexual, six were of white ethnicity and none appeared to be from low-income families. This may also be due to the demographic characteristics of the participants selecting the YouTubers in study 1. This means that the content reviewed in this study may not capture the views of seldom heard young people which is important as past studies have highlighted the

role social media can play in allowing marginalised young people to find support they may lack offline (Caroll and Kirkpatrick 2011).

The videos included in this study were main channel videos and selected if the video title met the health related screening criteria. These parameters were necessary to reduce the data to a manageable size (Kozinets 2015) but may mean that not all the health content produced by these YouTubers was included. Firstly, video naming conventions may have allowed relevant data to be excluded during the screening process. Secondly, many of the YouTubers have second channels which were not included in this study. These channels tend to contain “filler” content such as daily vlogs which show their domestic lives, cultural norms and practices (Abidin 2017). This content may include a more casual and unintentional sharing of YouTubers’ health behaviours which were not captured by this study.

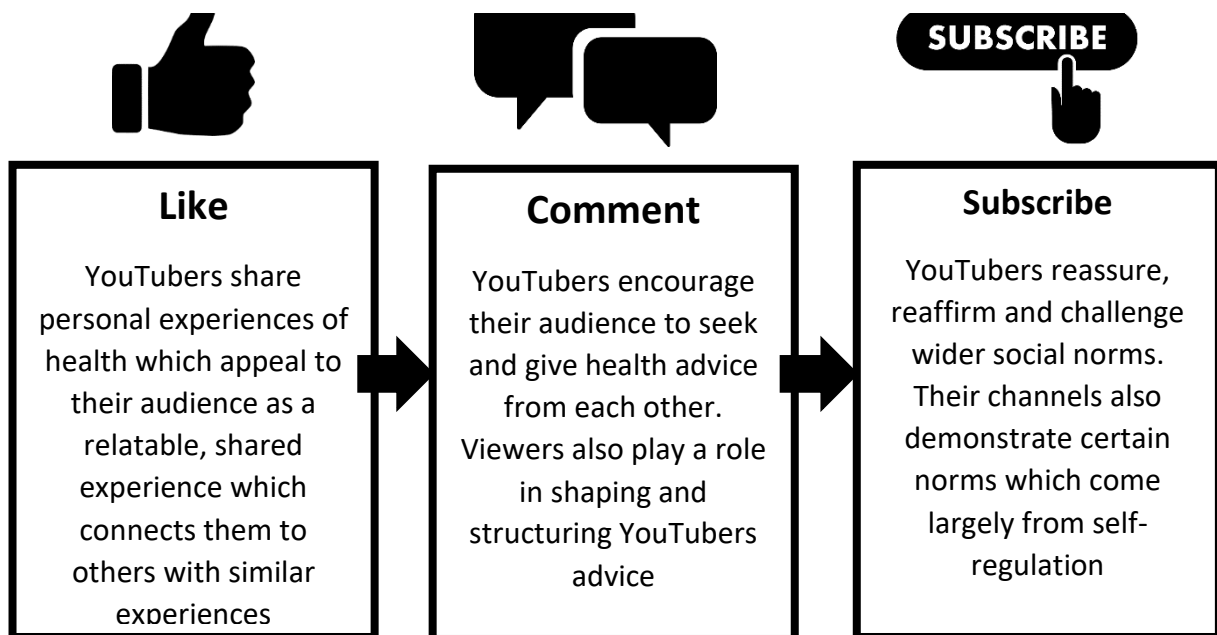
Lastly, the selection of comments included in this study was decided by the NCapture tool and limits the information which can be provided on the selection process. This research focuses on young people aged 13-18 years but it was not possible to stratify the selected comments by age. Where individuals stated their age, only those within the age range of this study were included and as the verbatim quotes above illustrated priority was given to comments which indicated that young people were in the desired age range (for example comments which mentioned high school attendance). This research focused on the UK but there was no way to establish commenters’ country of origin, although again priority was given to verbatim quotes which used British slang or terminology (for example school year versus grade). The anonymous nature of online comments meant that even where this information was present, there is no guarantee that commenters are reporting their true demographic characteristics or participating under multiple online identities (Germain *et al.* 2017).

5.4: Summary: How do YouTubers communicate health information?

This study has highlighted the ways in which YouTubers share personal health experiences, give health advice and communicate social norms to produce a wide variety of health content. During the transcribing of YouTuber videos for this study, there was one phrase which was

heard again and again. YouTubers repeatedly remind their audience to “Like comment and subscribe” and this often heard phrase is an accidental but rather apt metaphor for the key characteristics and appeals of YouTubers health communication (figure 5.3). Likes are often seen as a form of affirmation online (Goodyear *et al.* 2018b) and highlight a key appeal of YouTubers. They shared a relatable experience which confirmed to young people they were not alone in their own experiences. Through the comment section of their videos, YouTubers allowed their viewers to seek and respond to health advice which both encouraged community participation and allowed the YouTuber to position themselves in a non-expert role. Subscribing to a YouTube channel indicates users want to follow their content or want to be seen to be publically following (Burgess and Green, 2018) and provides an apt metaphor for the way in which YouTubers self-regulatory practices, YouTube regulations and wider social norms are all communicated through the health content YouTubers produce.

Figure 5.3: Key characteristics and appeals of YouTuber produced health content



The findings from this study suggest that YouTubers may therefore have a role to play in wider young people’s health improvement interventions due to their ability to signpost to authoritative sources and foster a sense of community. However, this study also pointed to several areas that warrant further investigation. In particular, the impact of gendered differences in communication style, commercial influences and YouTuber authenticity on young people’s perceptions of these messages which is explored in study 3 (chapter 6) and

how the pressures of being a health role model and regulation impact upon YouTubers' potential role in health improvement which is explored in study 4 (chapter 7).

Chapter 6: Focus groups exploring YouTubers' influence on young people's health behaviours (study 3)

This chapter presents the findings from seven focus groups with 13-18 year olds. The study objective was to explore the way in which the health content produced by UK YouTubers influences young people's health behaviours (taking into account differences in age, gender and class). The data collection procedures are described, followed by the findings from a thematic analysis of the focus groups and a discussion of the wider implications of these findings.

6.1: Methods

Sample and recruitment

Schools participating in study 1 (questionnaire, chapter 4) were invited to participate in the focus group study six months after the initial data collection. As the literature for this age group advises, the focus groups were intended to be stratified by gender and age (according to school year group) resulting in two single-sex focus groups for each year group with a maximum of ten participants in each group (Porcellato *et al.* 2002; Gibson 2007; Heath *et al.* 2009). Initially ten focus groups were recruited, one male and one female in each of the five year groups (years 9-13). However, three of the focus groups (year 9 females, year 11 males and females) had to be cancelled due to teacher absence and exam pressures respectively. The final sample was seven focus groups with 85 participants as described in table 6.1 below.

As illustrated below, the sixth form focus groups were mixed gender and had a sample size larger than ten as it was logistically easier for the college to recruit whole tutor groups to participate. As Gibson argues (2007) for young people in older age groups, homogeneity of gender is not always essential and both single and mixed gender focus groups can be successful. Similarly, the large focus group sizes were at times challenging but researchers can rarely control all group characteristics, particularly in the school environment, and practicalities and flexibility often have to be prioritised over an ideal sample (Gibson 2007). The impact of group composition on the data collection process has been considered in greater detail in a reflective stop-off below. Despite not recruiting the complete intended

sample for the focus groups, maximum variation was captured between the groups with younger, older, male and female students all represented (Emmel 2013). The focus groups thus reflected the significant age and gender differences in viewing and seeking YouTube health information observed in study 1.

Table 6.1: Focus Group Participants

	Number of participants	Gender	School	Year Group	Age	School type
FG1	5	Male	S1	9	13-14 years	Single-sex, state funded
FG2	9	Male	S5	10	14-15 years	Mixed, studio school
FG3	7	Female	S5	10	14-15 years	Mixed, studio school
FG4	15	Mixed	S3	12	16-17 years	Mixed, sixth form college
FG5	15	Mixed	S3	12	16-17 years	Mixed, sixth form college
FG6	16	Mixed	S3	13	17-18 years	Mixed, sixth form college
FG7	18	Mixed	S3	13	17-18 years	Mixed, sixth form college

Teachers who had also acted as gatekeepers in study 1 were approached initially to assist with focus group recruitment. Teachers signed a gatekeeper consent form and were asked to assist the researcher in identifying participants from their classes. Where possible, pre-established friendship groups were used to help establish rapport, ease of discussion and reflect the peer context in which health related social norms are constructed (Eder and Fingerson 2001; Gibson 2007). All young people were provided with a participant information sheet and consent form prior to the focus group. Opt-out parental consent was gained for young people under the age of 16.

Focus group design and data collection

As previously discussed in chapter 3, the focus group discussions were initially intended to act as a member check element that was embedded into study 2 to validate the researcher's interpretation of the netnographic analysis. However, during the data collection for studies 1 and 2 it became clear that wider themes were emerging that needed to be explored from young people's perspectives. The focus groups were therefore developed into a separate study with a topic guide that reflected these emerging themes (discussed below). This change in the research design allowed a fuller understanding of young people's perspectives, while the use of the triangulation protocol (Farmer *et al.* 2006) still allows complementary and

contradictory themes from studies 2 and 3 (Smith and McGannon 2018) to be identified in chapter 8.

The focus group topic guide was designed by drawing on themes from the literature, conceptual framework and the key findings from studies 1 and 2. Firstly an icebreaker exercise was used to put the participants at ease with each other and the researcher and introduce the research topic (Gibson 2007). The icebreaker was a ranking exercise in which participants were asked as a group to rank cards with sources of health information according to the most frequently consulted and the most accurate. Participants were then asked about health information on YouTube, and about YouTubers and health content. Photographs of YouTubers included in the netnographic study were used to prompt the discussion. Finally, the participants watched 2-3 minute excerpts from four YouTube videos and were asked to discuss each one in relation to the main message, quality, accuracy and young people's perceived impact of the video content on their behaviour (based on the theory of reasoned action) (Fishbein 1980).

A pragmatic selection criteria was used to ensure the videos reflected: 1) the key health topics identified from study 1 and 2 (mental health, physical activity, risk behaviours) 2) types of content (experiences, advice, social norms) and 3) areas identified for further exploration from young people's perspectives (gendered differences, impact of collaboration on authenticity) from study 2. Two of the videos were YouTuber experiences and advice on mental health (one male, one female), and one experience of physical activity (male). The final video selected had been produced collaboratively by YT5 for Public Health England's "Rise Above" PHSE campaign for Key Stages 3 and 4 (Public Health England 2016) and focused on social norms in relation to health risk behaviours. A full version of the topic guide is included in Appendix H.

All focus groups took place in a private classroom or office on school premises and during normal school hours.

Reflective Stop-off: Focus group ideals versus reality

Prior to beginning the focus group study, I had clear expectations for the group size and structure. The literature, my own experiences and the experiences of my supervisor all supported small (maximum ten participants), single sex, pre-established friendship groups which could take place in a quiet, private room. Of course the reality turned out to be very different, before I even had contact with the young people participating, it was necessary to negotiate school timetables, gatekeeper preferences, teachers' level of interest and the practicalities of the school environment. As a result, each focus group had its own unique challenges and during the transcription and analysis of these groups, I was able to reflect on the way in which each group discussion was shaped by these wider circumstances.

The year 9 boys' focus group was perhaps closest to the ideal I had in mind. I was given time to set up in an empty staff room next to the classroom before I was introduced to five boys. One of the participants had his own YouTube channel where he talked about a local football team and had recently been asked by their social media department to produce content in collaboration with them. He had been asked by his teacher if he would be interested in taking part and if he would bring along any of his friends who were also interested. The result was a group who were clearly at ease with each other, and on several occasions members of the group felt comfortable to challenge or present a counter opinion to the rest of the participants seemingly without any fear of judgement. They were also very interested in the research topic and were keen to continue the discussion of YouTubers at the end of the focus group when I asked if they had anything further to add.

In contrast, participants in the year 10 focus groups clearly had not negotiated who would participate among themselves. The head teacher had selected the male and female participants and neither the teacher nor the students themselves appeared to know the rationale for why they had been chosen. The male focus group appeared to be a wider friendship group although there was clear frustration from some members when others dominated the conversation or didn't take the questions seriously. The group had a keen interest in the topic and we had an animated discussion. Unfortunately, the classroom for the focus group was situated outside the offices of the senior leadership team and was also a place

where pupils who were excluded from the classroom were brought to work in isolation. This created a dilemma for me as I wanted the conversation to take place as naturally as possible but it did eventually become necessary to quieten the group.

When I returned a week later for the girls' focus group, I was shown into one of the staff offices situated off the same classroom. In order to set up for the focus group I had to take down the office Christmas tree which was on the only available table and as there were no chairs, I had to ask the girls to bring them in from the main classroom. This meant the focus group took a little while to get going and once it did it was clear to me that the participants weren't as ease with each other as the previous groups. The group appeared to be three smaller friendship groups who had been put together and some of the participants were clearly not comfortable speaking in front of each other. One participant did not speak at all despite occasional encouragement and another asked to leave half way through the group (which I had informed the group they were free to do). Two of the desks in the office became occupied by members of staff and some of the girls expressed clear frustration that the staff members were talking while the group took place.

Unlike the male groups, the girls initially appeared disinterested and unknowledgeable about the topic of YouTubers. However, as the conversation progressed it became clear that they were interested and engaged with the YouTubers and the group dynamic improved once the member who did not wish to proceed left the group.

The final four focus groups took place on a single day at a sixth form college. Difficulties in scheduling meant that when the groups did go ahead they were with full form classes of between sixteen to eighteen students. While the groups were split by age (two year 12 and two year 13 groups) it was not possible to further divide the groups by gender or existing friendships. Despite the group size, the year 13 groups worked well overall. The pupils had been together as a tutor group for nearly a year and a half and so were largely at ease with each other and the participation was relatively equal across group members. I arrived to run the focus groups halfway through their allotted tutor time, meaning they were already seated in their classroom, giving them more authority than if they had entered a room that I was already in. The only disadvantage to this set up was I did not have any control over the layout

of the room or time before the focus group to lay out the participant information sheets, consent forms or the materials and prompts for the icebreaker and discussion. One classroom was a computer lab, with participants sat at computers around the edge and in rows along the centre of the room. In this group, the icebreaker became vital. I laid the cards for the exercise out on a table at the front of the room and encouraged participants to stand and gather round to complete the exercise together. This set the tone for the group discussion and once the students returned to their seats, they naturally moved towards the centre of the room and the discussion flowed quite well despite the uncondusive physical layout.

The year 12 focus groups were more challenging. The students had only been together for a term (4 months) when I conducted the focus groups and it was clear that not all of the participants were completely at ease with each other. In these groups I had time to set up the rooms and move the furniture beforehand. The tutor for both these groups was off sick so another member of staff came to introduce me and complete the register for the group. Both of these factors meant that the students entered an unfamiliar scenario which did not help to put participants at ease. In the second group, this did not prove insurmountable and after a little time the group conversation did begin to flow more naturally. However, the first group appeared to be dominated by a group of three male students who for the large part did not wish to speak or engage with the group and this led to a lot of silences, with those students who did speak doing so quietly and hesitantly. At one point, I felt it necessary from an ethical perspective to reiterate that the students were under no obligation to participate and could leave if they wished to. None of the students did choose to leave, so I continued with the focus group schedule but I never really felt the group moved beyond basic responses to in depth discussion and I drew the group to a close after just half an hour.

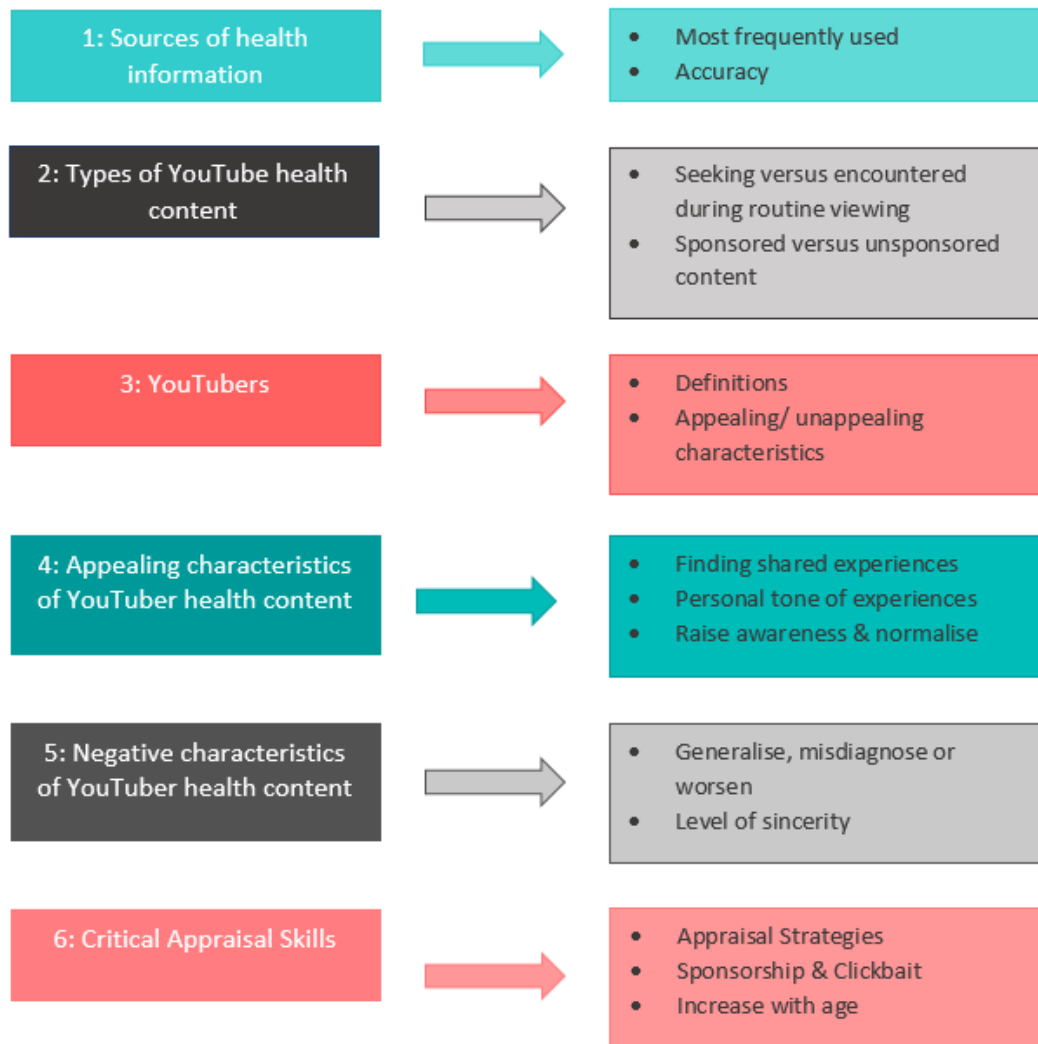
Analysis

Focus groups were transcribed verbatim and analysed in Nvivo version 11. As previously described (chapter 5), thematic analysis was chosen because it is a well-established method in health research. It allows for robust and sophisticated analyses which can be presented in a way accessible to those outside academia (Braun and Clarke 2006). The flexibility of thematic analysis (Clarke and Braun 2013; Braun and Clarke 2014) meant it could be used

across all of the qualitative studies making it easier to triangulate the findings (chapter 8), particularly as the selected triangulation protocol (Farmer *et al.* 2006) involves the convergence of themes.

The analysis followed the six phases described by Braun and Clarke (2006). During familiarisation with the transcripts, notes on potential codes were made by hand. These notes were reviewed to create a list of inductive codes and the data was coded systematically. By the eighth focus group, no new codes emerged leading to the conclusion that data saturation had been reached (Guest *et al.* 2016). The codes were then sorted to create a mind map of themes and subthemes that were refined and named (figure 6.1). The results of the thematic analysis are presented as a written narrative using verbatim quotes (Braun and Clarke 2006).

Figure 6.1: Thematic map of focus group analysis



6.2: Results

The thematic analysis of the focus groups is organised around six themes that were apparent from young people’s discussions of YouTuber produced health content. Firstly, the data from the icebreaker exercise was used to develop an understanding of the different sources of health information used by young people in the study. The young people’s discussion highlighted the type of health content they encountered on YouTube and the YouTubers they watched. Participants also highlighted a number of appeals and negatives to YouTuber produced health content. Finally, young people’s critical appraisal skills are discussed, including the strategies they use to assess the quality and accuracy of the health information they encounter on YouTube.

Theme 1: Sources of health information

Participant discussion during the ranking exercise is summarised thematically in table 6.2. Healthcare professionals were considered the most accurate source of information for young people because they were qualified, professionally trained and would give accurate advice. In contrast, traditional media (newspapers, magazines, television) and social media were universally considered the least accurate. However, when discussing the most frequently used sources of health information, participants' views were more varied. For some young people, NHS websites and "other websites" tended to rank above doctors, as young people in a number of the groups said they would search for their symptoms or health issue online first to decide if it was serious enough to warrant seeking a medical professional's advice. However, some were also sceptical about the quality of the information that could be found this way; this is illustrated in the third quote from the year 10 boys who joke about the type of false information that can be found on such websites and how this can encourage cyberchondria¹⁷.

R: So right at the top we've got NHS and Doctors, why are they at the top?

F3: because they're trained

M1: Because they're trained to do it

F5: they're professionals

F4: They know exactly what they're talking about.

Year 13, Mixed (2)

P4: I was thinking in terms of like it's their profession and everything

P1: You can -

P4: You can go to them because you know they'll give you like something, like that.

P1: But then you need to work out with them if it's serious enough to go to that.

Year 9 Males

P7: Other websites are at the bottom

P3: I think other websites would be high...

P1: No other websites, if you've got like an ache in your arm they'll say it needs to be amputated!

P3: Got a black eye

P2: You're going to die

P4: Google told me I was dying of bleach poisoning because I had white skin

Year 10 Males

¹⁷ The OED (2019) defines a cybercondriac as someone who compulsively searches the internet for information about particular real or imagined symptoms of illness

The two younger male groups (year 9 and year 10) said they might also use YouTube for this purpose. As one year 10 male participant suggests, this might be particularly appealing to males because of a reluctance to open up and talk about certain health issues (*"it's more like a trend of society and how we think, but you still have that like huge thing that you do not want to talk about it...So you'd go to YouTube to be like, I need something, to figure out like what you need, P1, Year 10 Males*). This is reflective of wider gendered norms in relation to masculinity and health seeking and suggests YouTube health information may be more appealing to young, male viewers. However, other groups were sceptical about the accuracy and truthfulness of YouTube produced content due to a lack of regulation (discussed in greater depth in the critical appraisal theme below). As the two quotes below highlight, participants felt YouTube information could be poor quality because anybody can upload health content in contrast to the more regulated nature of television content.

*P1: Well because like you don't have to ask anyone directly, you can just search it online on YouTube...
P1: Cos if you look on the internet for it, it's good but then like you can't actually see -
P2: You can't see a real person
P1: The person saying it
P2: Yeah.
P1: Because anyone could have just said it. But if it's someone on YouTube said it then you know they do mean it.*

Year 9, Males

*P3: YouTube
R: So why is that at the very bottom?
P3: 'cos I wouldn't use YouTube for that
R: Do you think the information you can find on there would be accurate?
P3: No
R: Why do you think that?
P1: Because anyone can just put anything up.*

Year 12 mixed (2)

*P5: I'd probably swap YouTube for television like to be honest. Because I feel like that's more reliable really.
'Cos YouTube you can just like do it.*

Year 10, females

This theme highlights the range of health sources (table 6.2 below) available to young people in the digital age (Livingstone and Sefton-Green 2016). This suggests that YouTube based health promotion efforts will need to be mindful of both competing sources of health information and suitability for differing audiences of young people (for example gender, age, current engagement with YouTubers) in order to target most effectively. Young people's decision to engage with health content on YouTube appears to be connected to their

appraisal of accuracy and wider identity constructs and this will be considered in detail as the chapter progresses.

Table 6.2: Common themes relating to sources of health information

Source of health information	Participant views
GP/Doctor	<ul style="list-style-type: none"> • Consensus that this was the most accurate source of information • Qualified, professional and accurate • Wait too long
Family	<ul style="list-style-type: none"> • One of the most frequently used sources • Would often seek their advice before a doctor • Certain things they wouldn't discuss for privacy reasons
NHS Website	<ul style="list-style-type: none"> • Consensus this would be accurate but mixed levels of awareness that NHS online sources which described symptoms were available. More likely to be aware of WebMD • Might visit this kind of website first to see if their symptoms were serious enough to warrant medical help
Other websites	<ul style="list-style-type: none"> • A frequently used source although this divided opinion • Positives were convenience and the ability to search and find specialist websites • Negatives: varying quality, might encourage misdiagnosis or cyberchondria. Generalist advice when not everyone will experience symptoms in the same way
YouTube	<ul style="list-style-type: none"> • YouTube appeared to be the health source which divided opinion the most. For older age groups it ranked quite low in terms of frequency and accuracy. For younger age groups (particularly year 9 and year 10 males) YouTube ranked quite highly (along with websites) as a place they might visit first to determine if their symptoms were serious enough. • The appeal of YouTube was they could see the person making the content, it was convenient and that it was a less embarrassing way to seek advice on sensitive topics. • Others, particularly in the older age groups were critical about the quality and truthfulness of YouTube health information
Friends	<ul style="list-style-type: none"> • Were considered a trusted source of information but not particularly accurate • Felt that health didn't concern them, they probably wouldn't know any more than the participants themselves and they may "wind you up" by giving false information
Social Media	<ul style="list-style-type: none"> • Universally considered untrustworthy and inaccurate • Some discussed that there was NHS and health charity content on social media but in general they wouldn't refer to social media for health information
Traditional media: newspapers & magazines, television	<ul style="list-style-type: none"> • Consensus among all groups was these were the least frequently visited sources of health information • Some discussed television programmes such as 24 hours in A&E and embarrassing bodies as informative but not somewhere they would look for information about their own health • When prompted the groups could recall some NHS produced advertisements but they didn't think these were particularly a source of health information • Negatives of traditional media for health information were that it aimed to entertain not inform, not searchable and among males there appeared to be cynicism for traditional media in general.

Theme 2: Types of YouTube content

The general consensus among the groups was that YouTube health content was for everybody and could be accessed by anybody. Participants made two distinctions when discussing YouTube health content: 1) health content they had specifically searched for versus health content they encountered in their everyday viewing and 2) sponsored content produced by or in collaboration with a commercial, health or charitable organisation versus unsponsored content.

The ease with which you could search for content was seen as a particular strength among participants and they gave examples such as: remedies for the common cold, first aid, information about specific treatments and procedures, food and workout routines. The two quotes below are from female participants who gave examples of health information they had searched for on YouTube. The first had looked up videos prior to an operation to see what the procedure would be like. The second had looked up how to treat a sprained ankle. Interestingly, when this participant was asked how she knew the information she had found was good quality, she replied that a medical professional had confirmed the wrapping technique she had used was correct. This suggests, as discussed above, that young people are making use of multiple sources of health information and that online sources are often seen as a stop-gap or sense check before seeking advice from a healthcare professional (young people's interpretation of the quality and accuracy of health information is discussed under the critical appraisal theme below). The final quote highlights the overall appeal of this information was the ease with which participants could find advice from people who had a similar health experience.

F3: YouTube maybe to like watch videos about it. Like, I've done it before for an operation and something. I watched videos about it

Year 13, Mixed (2)

P4: They have like physiotherapy stuff on YouTube because when I sprained me ankle I used it.

R: Ok, and did you look it up on YouTube? To find out what to do about it? And what kind of things did you find?

P4: It was like, how to like stretch your ankle to like repair the ligaments faster.

R: Ok and did you think it was good information? How could you tell?

P4: 'Cos, like I went the doctor and the thing was wrapped, and he was like it looks perfect, you did it perfectly. And erm the ligaments were ok after like a week instead of like a month.

Year 10, Females

F4: You can get like a lot of things of support and like ways to manage on YouTube can't you...Yeah or just like if you find you've got a certain issue, you can go on YouTube and find other people who offer advice because they've had that experience as well.

Year 13, Mixed

Participants also discussed occasions when they had encountered health information in the content of YouTubers they watched regularly. In agreement with the findings from study 2 (chapter 5), this content appeared to focus more on the YouTuber sharing their personal health experiences. Younger male participants stated they preferred content from a familiar YouTuber and would also prioritise content from a YouTuber they knew when searching for health information. In contrast, the older age groups said health information was not their reason for watching YouTubers but they were still aware of this content. During this discussion, participants were shown photographs of YouTubers included in study 2. In every focus group, at least one participant was aware of the anxiety content produced by YT1 and the depression content produced by YT4 even when this health content was not their motivation for watching the YouTuber in question. The younger male participants were particularly knowledgeable in this area, suggesting additional examples of YouTubers discussing these topics.

P3: If there's, if someone that I watch has done a video on what I'm, looking for

P4: You'd watch that first

P3: I'd go to them first

P1: Yeah

P3: Yeah, but then if there isn't, I'd just try and find the next one.

Year 9, Males

R: Ok, what about [YT4], is anyone aware of any health content he produces?

M7: yeah I watch him

F3: I've heard of him

M7: Erm, he's talked a bit about depression in the past but I don't go to him to find that out.

R: Yeah, you wouldn't necessarily search for it but you've just come across it while you're on YouTube?

M7: Yeah from just watching his videos.

Year 13, Mixed (2)

R: Ok, do we want to have a look at [YT1]. Anyone aware of any content she makes?

F5: Mental health

R: Mental health yeah

F6: She makes mental health videos about her anxiety

Year 13, Mixed (1)

Participants also distinguished between videos produced or sponsored by commercial, charitable or government sources compared to unsponsored YouTuber or amateur content. In the quotes below, a year 13 male participant gives the example of content produced by a drug company while the year 10 female participants discuss a collaboration between YouTubers and a cancer charity. This demonstrates young people's awareness of commercial influences on YouTube across all age groups. Their ability to critically appraise this kind of content is discussed in detail later in this chapter.

M1: Like there's also certain, I suppose drug companies that produce videos on YouTube, I suppose there's like antibiotics or like GSK or somewhere like that do release some videos about what certain like tablets and stuff like that.

R: Oh ok, and what do you think about that kind of content?

M1: I think it's probably got more of a corporate background than focusing on the health of someone who's going to be receiving the drugs themselves. But I can understand why they post videos online just so they can get more understanding of what they are actually selling.

Year 13, Mixed (1)

P1: They do a lot of charities don't they?

P3: Like cancer...

P1: That's like most YouTubers to be fair.

Year 10, Females

Theme 3: YouTubers

Before discussing YouTuber produced health content, the participants were asked about YouTubers more generally to gauge their level of interest and engagement with this kind of content. Across all age groups, there was high awareness of YouTubers and there were participants in all age groups who had watched YouTuber produced content. Younger participants appeared more engaged; making conversational reference to YouTuber culture, joking about certain YouTubers and referring to specific videos or events in the YouTubers' lives. There was a sense from these discussions of the level of influence that YouTubers can have for some young people, the complexities of their engagement and the way in which this has changed with age.

Three quotes from their discussion have been selected below to illustrate different aspects of this. In the first quote, the year 9 male group discuss YT2 after being shown a photograph.

We can see from their discussion that they have a high level of knowledge and engagement and this also highlights the balance for younger participants between enjoying a YouTuber's content and also being aware of controversy surrounding them. This tension is revisited in more depth under the critical appraisal theme below. In the second quote, the year 10 female participants discuss YT1 with one participant saying that YT1 seems "*more like a big sister than anything*" (P2, Year 10, Females) illustrating feelings of a sustained social relationship with the YouTuber based on a sense of community and trust. The final quote from the year 10 male focus group serves to highlight the nuances and complexities of their engagement with these YouTubers. This exchange was prompted by a question on what was meant by the term "YouTuber". The question from the researcher's perspective was meant largely for sense checking at the beginning of the focus group; to ensure the terminology being used was relevant and commonly understood. However, as the exchange below highlights, the participants' definition was linked to the YouTubers' level of authenticity, their perceived intentions for producing content on the platform and how much they cared about their content and their community.

P1: That's [YT2]. Yeah, he's been involved with a lot of bad things.
P2: bad things
P5; He was accused of being racist
P2: He was fired from Disney
P4: When did he get fired from Disney?
P2: I don't know, he was.
P4: What? No way...
P1: Yeah, sometimes he's helpful, sometimes he's completely not
P2: And he's shorter, his videos - he used to do gaming stuff, he doesn't do it anymore.
R: He doesn't do it anymore? Do you guys watch him?
P5: I do!
P1: Some of it
P4: I laugh my head off at it. He's so funny
P3: He is funny yeah

Year 9, Male

P1: She also done it when she didn't have that many people following her and that didn't she?
P4: Exactly, that's like the way she started out as well.
P1: She didn't like, she genuinely sat there and spoke to people and I feel like that's why people did start watching her because it's like she is relatable and people do sort of see her as helping, I don't know.
P2: She seems more like a big sister than anything really. She just seems like you could just watch and it's fine because you're not on your own and like, do you know what I mean...
P1: I'm sure she was the first person I watched that actually spoke about it [anxiety] that was realistic about it rather than making it look good.

Year 10, Females

P7: YouTuber is like the overall and then gamer and that is like categories inside that thing.

P4: You know like [YouTuber name] is a vlogger...

P1: It depends to be honest because you've got a lot of YouTubers and you've got like those talk show hosts and it's like, it's like...You've got like a strong thing of YouTubers, like actual YouTubers and people who are plugged in by YouTubers.

P7: Like using like YouTube as their mainstream is being like be a YouTuber whereas people with other ways of outputting their content would be, but just doing YouTube for like extra advertising and that, that wouldn't be a YouTuber.

R: That wouldn't be a YouTuber. Ok, and do you have a preference or does it not really matter if it is on YouTube?

P7: I would prefer like the actual YouTubers

P1: Yeah actually like. There's like a difference between people who are just like bought to be there and are just like

P2: All the celebrities in the world

P1: It's like, people who like. You can see the difference between like people who are YouTubers and people who are like bought to be there. Because you've got people who are like, just gonna brag who are like oh yeah, I'm an entrepreneur, I sell t-shirts online man. I'm a public figure in this place and this place. And you've got actual YouTubers just care about making videos and like the community.

There are clear parallels between these discussions and the themes that arose in study 2 with both the relatability and authenticity of YouTubers particularly appealing to young people. From a health promotion perspective, this repeated emphasis on these two aspects suggests that YouTubers will be most effective if they are promoting health messages which are consistent with their previous content. Young people's preference for certain YouTubers appeared to reflect their wider values. This is illustrated in the quote below in which the older participants perceive gendered differences in viewing preferences as well as feeling that YouTubers had less influence as they matured. This perceived erosion of influence with age is common across social media studies with young people (Livingstone 2014) and suggests YouTubers may be more promising for health promotion among younger teenagers.

P1: You're more easily influenced when you're younger.

R: Ok - do you think YouTubers are influential?

P3: yeah I do

R: What age group would you say?

P1: As you're starting to get into your teenage years as your 13 or 14.

R: Ok and do you think it is the same for boys as for girls?

P1: Probably more for girls

R: Are there certain ones that you've got in mind for young girls

P1: Er, just like ones who do makeup and like daily routines and stuff like that.

R: Ok, and what about lads then, what are more popular for lads?

P3: Podcasts yeah

P1: Cheat ones.

Year 12, Mixed (1)

Theme 4: Appealing characteristics of YouTuber produced health content

Finding shared experiences

In agreement with the findings from study 2, participating young people highlighted the appeal of finding a shared health experience through YouTuber health content. Firstly, from a practical sense, participants spoke of the opportunity to view healthcare settings and procedures (such as surgery) to prepare themselves for what they should expect and for wider wellbeing purposes (for example to find instruction on physical activity content like Yoga). More widely, participants also discussed how finding YouTubers who experience similar physical or mental health conditions could help participants realise they are not alone in their experiences and learn coping strategies. This suggests YouTubers may be particularly promising in breaking down the stigma associated with certain health issues and help seeking among young people.

F1: I think it's good on YouTube though, I mean like if you looked at something, say like to do with your health and then it talked about a certain procedure you had to do and you know you did have a condition or whatever, then you can probably find a video on YouTube couldn't you. Of what that procedure was.

Year 13 Mixed (1)

P3: Like somebody with depression might watch that video and think that they're not the only one.

Year 9, Males

P1: Just like, YouTube is like, if a YouTuber is sufferin' with stuff then you can find out a lot more about them and that can help you in ways if you are sufferin' in the same ways

Year 9, Males

F4: Yeah or just like if you find you've got a certain issue, you can go on YouTube and find other people who offer advice because they've had that experience as well.

Year 13, Mixed

Personal tone of experiences

One of the main appeals of YouTuber health content discussed was the perception that they were genuine personal experiences. Young people often discussed this in relation to the positive, open and on occasions humorous tone with which these messages were delivered.

In all four quotes below, we see the participants use the term “*relatable*” to describe the way in which YouTubers portrayed an everyday version of health events that they themselves had experienced in similar ways. Participants’ discussion of relatable content highlights YouTubers’ sharing of emotional aspects of their experiences (rather than clinical language) and the similarities between these interactions and the conversations participants would have with their own friends. This suggests that for some people YouTubers are viewed as an extension of peer-constructed norms. While this is no guarantee that encounters with YouTubers will result in influence, the evidence on peer influence does suggest this is linked with salience with young people more likely to emulate the health behaviours of admired associates (Prinstein and Dodge 2008).

F4: It's like more supportive. It's not quite like got any sort of medical twist to it, it's more like something you can relate to. Like certain people can watch it and say well I feel like that and erm it's more like, she's explaining how to deal with something instead of saying basically only other YouTubers kind of thing.

Year 13, Mixed

P1: She's more open about it but not to the point where she makes people feel like they have to be like that, do you know what I mean?

P5: She's real about it as well. Like she doesn't make it look fashionable thing.

P1: Yeah like she doesn't make it look good or nothing. She genuinely says, am sure she, doesn't she say in one of her videos, it's not like a nice thing to have. And it's horrible. Because like she can't really go anywhere without feeling anxious.

P5: Or nervous

P1: Yeah. She's proper like, she proper awkward as well. I feel like that's why she's more relatable to people with anxiety like she'll openly speak about it and like.

Year 10, Females

P1: They looked friendly; they didn't look too serious and in a way that's kind of nice because they had some jokes in it. You know they were talking about it kind of like one, you know as like a normal conversation you would have with a friend. So it kind of makes you feel like chill with them. It makes you feel ok, these people are relatable, this is the kind of conversation I have with a friend. These people are like two friends. These people are like my friends. And obviously like watch them.

Year 10, Males

Raising awareness and normalising

Practically, participants felt that YouTubers could raise awareness of health topics and that through this content they could help normalise and reduce stigma around sensitive or under-discussed health topics such as mental health. In the examples below, participants discuss how mental health content can reach those with diagnosed mental health conditions but also increase awareness among those who were unaware or unknowledgeable of these conditions.

The Year 10 males gave an example of a YouTuber they regularly watched producing a video on mental health content for the first time and how this prompted them to begin thinking seriously about the topic. The Year 13 students reflect on how mental health is an under-discussed topic among their male peers and how male YouTubers sharing these experiences can open up conversations about mental health. These examples suggest YouTubers might be particularly promising in reducing stigma and encouraging help seeking among males.

M3: I wouldn't say she's like qualified to talk about it but she's just more mentioning it so she can direct people where to look if they are suffering with it. And because she's probably, someone with a large audience she will have like viewers who have anxiety and she would obviously be helping them even if they don't know they do have anxiety themselves. So er I can see benefits to it.

Year 13, Mixed (1)

P1: Well yeah, because if people are picking on you for it. If they see that someone really big and famous has got that and they like them then they are going to change their opinion on it

Year 9, Males

P1: Yeah, if you have like a proper mainstream YouTuber right and like that you watch them every single day and then one day it pops up with like a video about like mental health. Cause I know like [YouTuber name] did that and he was just like, a change of like you know the pace. It actually like makes you think about it

P8: yeah

P1: Because it's something that you know your favourite YouTuber is watching and thinking about, so you start thinking about it and it kind of starts to make you think about it.

Year 10, Males

F7: It's not like a bad thing. Like it's not like weird if you're depressed it's just something that's just, like

M5: Yeah

F4: And it's something that affects a lot of people...

F4: There's much more help available for people with mental health problems. Especially girls, I think there's a lot more help available for females than there is for males...Yeah, because he's male and he's showing that males suffer with mental health problems too and it's not a bad thing. It doesn't make them any less of a person.

F3: Yeah

F2: And it's ok

Year 13, Mixed

Theme 5: Negative characteristics of YouTuber produced health content

Generalising and misdiagnosis

The issue of YouTubers generalising their own health experience was discussed very frequently by the young people. As highlighted in the quotes below, participants were concerned that YouTubers shared their personal experiences as a definitive experience of the

health issue in question and this did not reflect the diversity of experiences that exist. The final quote below is a discussion about a video on depression produced by YT4. The participants felt that the YouTuber placed too much emphasis on medication as his own treatment choice and did not give enough time to the discussion of other treatment options that may be preferable and more effective for some of his audience. Participants felt the potential consequences of generalising were it could lead to incorrect self-diagnosis, or it could trigger or worsen symptoms. A year 13 female participant below discusses how they felt the language used by YT1 to describe anxiety lacked sensitivity. A number of the participants also discussed their concerns that discussion of mental health conditions such as anxiety and depression among popular YouTubers could “romanticise” (P4, Year 10 Females) them for younger viewers and potentially lead them to the self-diagnosing these conditions in order to be more like the YouTuber in question.

P1: She [YT1] was trying to generalise like her personal experiences to everyone...
P3: I think we should share experiences because like it could help people but like it's important to make sure you kind of stay neutral and you don't make people feel like worse.

Year 9, Males

M7: I thought that one was a bit more like, it was more straight forward than the other one. Like that's his own experience, you can't say that everyone would have the same sort, do you know what I mean, whereas the other one I thought was a bit more like, everyone has the same, not different sorts.

Year 13, Mixed (1)

F7: I feel like he was trying to push the medication more than the therapy
F3: Yeah
F1: Same
F5: Yeah and for some people there might be something that triggered it and they might need to talk about that and then they'll be ok. Whereas I feel like he was just trying to go with the medication.
F4: Yeah I think medication should be a last resort.
F8: I don't think he er highlighted the negatives either, like all the change in dosages over six months, all the trial and error.

Year 13, Mixed (2)

F1: She was like normal anxiety and people who do have anxiety might watch that, especially if they are younger, and be like so I'm not normal for how I'm feeling?... Like people with an actual anxiety disorder, it may make them feel worse about the situation.
F4: Her analogy to a car was really quite patronising and condescending

Year 13, Mixed (2)

F5: Cos it's like erm, it's so the person doesn't think that everything they say is, it's like they're not self-diagnosing themselves, like erm they're saying. Cos I think younger years can, if they hear someone like [YT1] saying oh I've got anxiety and that, they could think well I want to have anxiety. It's kind of like turning it into something [pause]

R: Yeah I know what you mean

F5: Yeah, yeah 'cos if [YT1]'s got it, then it's ok to have it so I will have it. Do you know what I mean?

R: Yeah

F5: Not many people do but I think I have seen, in my sister's year, there's a lot of, when they talk about it I feel like there's a lot of people that do that.

Year 13, Mixed (1)

Level of sincerity

The majority of participants felt they could discern from YouTubers' methods of communication how genuine and sincere these health experiences were. Several mentioned that if the YouTuber did not position themselves as an expert then this increased participants' conviction that they were providing a truthful account of their experiences. As illustrated in the second quote, the year 10 male participants discussed how lower production value, with the YouTuber talking informally to the camera and fewer editing effects, were perceived as more sincere. Some young people measured sincerity against the YouTuber's scope for personal gain from the video and participants framed this in relation to other sources of health advice. For example, in the second quote below, a female participant compares a YouTuber's motivations to produce health content against those of a family member or other adult providing health and wellbeing advice. They describe how distance and a lack of personal relationship with their audience meant YouTubers were more likely to provide an impartial and honest account. This also appears to appeal to the individual's sense of self-reliance and autonomy in contrast to feelings of adult control.

F5: I think she does openly in a lot of them that it is her experience that she's not an expert but it's just trying to give like a voice to it. Like it's hard if from, like, if someone did have mental health problems and they can see someone else who's gone through it and is open and is talking about it. It is probably quite helpful for that erm to help them manage it.

Year 13, Mixed (1)

P6: You can tell that like they were not just doing it for money because like the production value was just sitting in their house. It's not like there's a background... It gets to the point. You don't always have to like push in the money. It, it's, videos, videos that go slow, like have a slow, non-edited, camera on you, straight to the point like. You wouldn't have like flashes and explosions just like Woah! Depression. Boom.

P7: I know we're going off, we're going off the like the point, but it's what happened to them in their past. It's their experiences.

Year 10, Males

P1: Yeah, because when your teachers are telling you not to do things or like your mum or like your grandparents. It kind of like, you feel like they're just trying to control you and feel like they're just trying to like just 'cos they love and you and just 'cos they're your family that's why they're telling you. And just because they're your school teacher, that's why they're telling you it. Whereas them, they don't know us personally, they don't care about us really. Like, they don't, as much as they care about the viewers they don't care about each person and their individual lives. So them telling us that is kind of like well they don't know me, but they're still telling me not to do it because it's unsafe. And you believe it more from them because they're not telling you to not because they know you personally.

Year 10, Females

Older participants tended to be more measured in their views of sincerity. As the two quotes below from the year 13 focus groups highlight, their concerns were more focused on how qualified the YouTubers were to talk about health topics. It was important that YouTubers acknowledged they were speaking from personal experience and opinion and not a position of professional expertise. In contrast, younger participants' understandings of sincerity were more varied. For some younger participants, the sincerity or truthfulness of the YouTuber's experience appeared to be indicative of the accuracy of the health content they produced. In the first two quotes below the year 9 focus group discuss how being able to see the person themselves talking on YouTube (in comparison to other websites and social media) increased their reliability. Similarly, they felt that those with personal experiences of a health condition were more likely to have researched the topic more thoroughly and thus present more accurate information.

F4: Yeah I think it has a positive effect but I think it has a more positive effect if you're open and truthful. I mean they could have been but they could not have been. About your experience and this is what it's like, I did it, learn from the experience that kind of thing. Yeah instead of saying don't do it, say yeah I did this the effect of it. This is my personal view as a result.

Year 13, Mixed (2)

R: And do you think he [YT2] would be a reliable source of information

[General Consensus]: No

R: And why not?

M6: Because he doesn't know what he's talking about

R: And why do you think that?

M6: Because he isn't trained to talk accurately on it. Does that make sense?

Year 13, Mixed (2)

P1: Cos if you look on the internet for it, it's good but then like you can't actually see -

P2: You can't see a real person

P1: The person saying it

P2: Yeah.

P1: Because anyone could have just said it. But if its someone on YouTube said it then you know they do mean it.

Year 9, Males

P3: You know they're gonna kind of be like right as well, because if they're going through that same thing, they're gonna obviously have done their research as well.

P2: Yeah

P3: What they're saying is most likely it's gonna be true.

Year 9, Males

In contrast, other younger participants discussed occasions when they were cynical or critical of the level of sincerity and accuracy in YouTuber health content. Among the younger male focus groups, opinions varied between: YouTubers being prone to some exaggeration, to making health videos “*purely because it gets the views*” (P5, Year 10, Males). In the first quote below the year 9 males, who were the most positive about YouTuber health content, discuss an example of how physical activity content could be exaggerated by a male YouTuber to make it seem more strenuous. In the second quote, the more cynical year 10 males discuss YouTuber motivations to make mental health content. We can see from their exchange that they self-categorise YouTubers as those who are making content to genuinely help their fans (who were viewed positively) and those who are motivated purely by views and profits (who were viewed negatively).

R: And what were you saying about some of the gym videos?

P5: yeah there's some, there's some ones that like I don't know they kind of like

P4: And I think some people try and make it over dramatic, like they'll

P1: Yeah like they'll do, it'll show like a minute of non-stop doing workouts but that will be the only time they'll do that and they just do it for a video. Whereas he's doing completely different things on that video.

P4: Or they'll make like really loud noises like ahhh, ahh it's really hard but it's really not that hard.

Y9, Males

P7: And loads of people I know like all that rather than go on to like people they know which can be a bit awkward. They just search it up and then YouTube might be one of the first things that comes up and they know that they can make money off it...

P1: I mean well some people, they kind of like, obviously you've got some people who kind of like push mental health as like, because they've seen something from their own fanbase. What I like, one of the things that get people talking is like, say a fan goes to the YouTuber and says "aw, I'm feeling depressed, your videos helped me and that's kind of like the spark".

P8: And just like

P1: It's the realisation for a lot of YouTubers...but they kind of realise how much, how in a sense. But not how but how like influence [sic] they have over people and that their videos are actually helping people in a sense. So they feel like a sense that like they need to continue this and it kind of affects them in their brain. Whereas others, they see it as aww yeah, if I talk about mental health I could get sponsored by this, I could get sponsored by that. Look how much money I'm gonna get. It's being fake for you know like public reputation.

Y10, Males

This begins to point towards an interesting paradox in relation to YouTubers' role in health promotion. Younger participants appear more engaged with YouTuber health content but less equipped to critically appraise it, and so collaboration between YouTubers and health organisations to increase the accuracy of their content appears promising for this age group. However, as more involved viewers of YouTubers, this age group also appear more sensitive to changes in YouTubers content that suggests collaborations will be greeted with cynicism. This tension is explored further through the critical appraisal theme below.

Theme 6: Critical Appraisal Skills

The focus groups also considered the ability of other young people to critically appraise YouTuber produced health content. Three subthemes were identified in their discussion: the appraisal strategies they used to assess YouTube health information, their ability to recognise sponsorship and advertisements within YouTuber content and the changes in these skills which come with age.

Participants identified a number of ways in which they would confirm the accuracy of health information on YouTube. Practical strategies included watching multiple videos on the same topic to compare information and searching for the information themselves online to confirm the accuracy of what they had watched. Participants also discussed how the video source played an important role in confirming accuracy with videos produced by healthcare professionals, the NHS and recognised health charities described as more likely to contain accurate information. They also discussed how YouTuber collaboration with these

organisations would increase the accuracy of the health content they produced, thus highlighting the potential of YouTubers for future health promotion campaigns.

P3: Watch maybe a few
P1: Well if you do, yeah watch a few of them. If you do your own research and then can prove them wrong and stuff.
Year 9, Males

F6: Try it yourself
M5: Put it in a search engine
F2: Google it maybe
F1: If lots of sources are saying the same thing it makes you trust it a bit more
R: Are there any kind of people who would produce those videos that would be more trustworthy than others?
F4: Trained doctors that post those kind of videos in order to give people that advice. Or younger people
Year 13, Mixed (2)

F6: yeah, like if it was like a charity, so like Mind which is mental health. So you'd know that was a trustworthy source.
Year 13, Mixed (1)

P3: There's sometimes where like a YouTuber will be asked by the NHS to do a video, to keep us informed
Year 9, Males

In addition, some of the younger participants described how their personal interest and knowledge of the YouTuber helped them to assess the quality of their health content. On several occasions, participants gave examples of seeing a change in the YouTuber over time through their regular viewing, for example improvements in fitness. In the second quote, we see a participant describing how changes in fitness could increase viewers' self-efficacy to implement similar lifestyle changes. In other cases, the reasoning behind participants' appraisal of accuracy was far less explicit. In the final two quotes below, the participants discuss more subtle aspects such as the tone of discussion and their knowledge of the YouTuber's personal circumstances. This suggests that for younger viewers a sense of familiarity and trust towards YouTubers they watch could limit their ability to appraise inaccurate health content as trustworthy.

P3: And if you watch, probably if you watch his videos from when like he first started, to now. You'd probably notice the difference.
P4: It's like if he's really been getting fit...
Year 9, Males

P1: Because he wasn't skinny at first and he wasn't like, he's good looking but he wasn't as good as he is now. So I feel like if you want to get to that level this is what I've done and this is what you could do too. So it's like ok, I'm going to try.
Year 10, Females

P1: Just cos you know he's suffered from it and he said he like, he's had it six months before he realised. Er, so things like that you just think he's telling the truth.

Year 9, Males

P1: You can kind of tell by the way they speak. And the sincerity of it. Because you can see the kind of like two different reasons. People will have reasons to speak about it, either personal reasons, either they've seen other people or they really just want to bring attention to the issue, maybe a certain day.

Year 10, Males

In general, participants perceived themselves to be confident in identifying when video content was commercially sponsored or featured advertising. Similar to their discussion of critical appraisal, the participants outlined a number of practical strategies they employed to identify sponsored content. This included verbal disclosure of sponsorship by the YouTuber, the word “ad” or “#ad” appearing in the video or video title, and disclosure of sponsorship in the video description. Young people were also aware of the Advertising Standards Agency (ASA) rules and YouTube policy towards sponsored content. The ASA Committees of Advertising Practice (CAP) code requires paid-for advertising on social media to be obviously identifiable (for example through the use of #ad or similar) (Advertising Standards Agency 2016). In addition, content creators on YouTube are required by the platform to disclose paid product placements, endorsements and other sponsorship through methods such as title cards, end cards or in text disclosure. YouTubers are also required to notify YouTube of any paid promotion when they upload a video (YouTube 2016).

P1: Well usually they say like, this is sponsored or it'll say

P3: It'll say ad

P1: Or it'll say ad in the corner.

P2: And the description...Yeah, I'll always go and like look at it when I'm watching stuff.

Year 9, Males

P1: If there are ads.

R: If there are ads yeah

P4: Discount codes

R: Ok

P1: Basically like if they say aw yeah depression, here's one thing that will help you. Try my health tracker and stuff like yeah.

P7: If they actually mention the sponsor.

P8: Plugs at the end of the video

P10: They actually have to say if it is sponsored.

R: Ok, so how do they do that?

P10: Well, they just have to say if they are sponsored by these people... They actually say in the video

P2: or actually, it's not technically.

P10: It's illegal to not say if the video is sponsored

Year 10, Males

P3: And there's a law now about it isn't there

R: Yeah?

P3: That you can't like do an ad unless you specify that you have.

Year 9, Males

In addition to these practical checks, participants also discussed how they thought advertising could also sometimes “sneak in” to videos. They discussed the ways in which they could identify this, for example if a YouTuber was excessively or consistently positive about a certain product or if their tone became more scripted or measured. In some cases, this wariness was also present when discussing sponsored health content. Participants felt that YouTubers’ motives to make this kind of content could be questionable and they may present false health experiences in order to sell a particular product. In the final quote below, the year 13 participant discusses a time when they had watched a You Tuber discuss weight loss and then realised the video was promoting the use of a diet pill.

P1: You can tell by just like the way they're acting. And 'cos like in their normal videos, you can sort of tell that they're acting towards like better towards it, which they must have told them to do really.

Year 9, Males

P1: But then if he said like that he was sponsored by them I feel like that would be ok, because he's being honest. But then like I feel as like, it's not just that one video. People make videos out of the blue just because someone sponsored them whereas he didn't, that's what his normal videos are like, he does sort of speak about it. Rather than, it wasn't just a random video that was like I'm only doing this because I've been sponsored by them.

Year 10, Females

R: Ok. What about if it was sponsored about health content. Would that make any difference?

F8: Yeah, that's pretty sly like

F7: I was watching this video about like weight loss and stuff and then half way through they mention this erm, diet pill that you can take and I was like ah no, I'll just get off it do you know what I mean. You can't trust any of it.

Year 13, Mixed (2)

Older participants appeared to be more detached in their views of this content and more likely to apply their critical appraisal skills universally. In line with existing research on health literacy, older participants tended to frame any conversations about negative impacts of health content in relation to the impact on younger viewers. The consensus for older participants was that YouTubers were more frequently watched and more influential for younger teenagers. In relation to their ability to assess the accuracy of online information,

participants felt this was something that they had learnt with age and that they were now better equipped to critique the quality of the health information they encountered on YouTube. However, older participants also tended to be less concerned about sponsorship. As the final quote below illustrates, there was general recognition that this was how YouTubers made their living and that they were happy to watch sponsored content as long as it was also entertaining.

*F2: And I think for like young people as well it's just easier watching videos isn't it.
M2: Like we've got more maturity than like some younger people so we know to look online for symptoms and illness whereas I don't think kids probably would. So they'd just go on YouTube.*
Year 13, Mixed (1)

F8: I don't think it is just about social media, I like think it is just about we know more [laughter]... No I don't mean, I don't mean like, I just mean you learn in life don't trust anything anyone tells you. You should probably Google it, check it afterwards. I think that's just something you learn.
Year 13, Mixed (2)

*F7: Oh yeah, they sneak it in like
M6: Yeah.
F8: And it's like, well it's not hard to notice, but they try and make out like they're just mentioning it in the video but they've obviously been getting a bit of money to put the name in there.
R: And what is your opinion when you see that in a video?
M5: I just think that's how they get their money. I don't care
F8: Yeah, they've got to get their money somewhere like. They're not just doing it out of the niceness of their heart are they? So...
M6: As long as it's a good video I don't mind.*
Year 13, Mixed (2)

In contrast, younger participants acknowledged, “you sort of know what's right and what's wrong, but you can also get it wrong sometimes” (P1, Year 9, Males). In the first quote below, the youngest participants discuss clickbait¹⁸ naming conventions on YouTube. They were aware of the purpose of these view-increasing techniques online but they still admitted they will engage with this kind of content out of curiosity. Younger female participants also discussed how they felt their peers were not well-prepared to critically assess the quality of health content they saw online. Sponsorship among this age group was also less well received. Some felt sponsorship was dishonest and others were critical of YouTubers who had “sold out” by endorsing brands and putting profits before their audience. This expands on the conundrum discussed above, will public health intervening in YouTuber health messages be

¹⁸ Clickbait is defined as “(on the internet) content whose main purpose is to attract attention and encourage visitors to click on a link to a particular web page” (OED, 2018)

seen as a welcome improvement in accuracy by young people or be seen as an unwelcome intrusion into their existing relationship with YouTubers? This is a key consideration for YouTubers potential in health promotion that will be considered in greater depth in the discussion.

*P2: Well they can do like clickbait so like
P4: Yeah clickbait
P2: So you'll click on a video but that's not what that, what it isn't. So maybe like-
P1: They'll exaggerate things...
P2: It's like I've got like a Lamborghini, and it's just like a normal car. But of course you want to see a
Lamborghini and so you'll click on it and they'll get more views so.
R: Yeah, so that kind of thing. And is it something that you've all fell for before?
P2: yeah of course
P3: Well you don't particularly fall for it, you're just kind of curious to see what, you know it's going to be fake
but you just kind of want to see
P4: You like let's just see
P2: Yeah
P4: And then you're giving them money for nothing really*

Year 9, Males

P1: I feel like they're just blinded because social media makes it look like this really good thing and then like it's not do you know what I mean. So yeah, exactly like our whole year, like there's obviously a few of us that are critical about it and we're not bothered because we have seen like either people go through it or we know what it's like whereas other people don't and they just assume that's what it's like. And then they'll go around saying they have it and I dunno it's just. They don't really see through it. It's just what this it is and then that's it. It's nothing about it.

Year 10, Females)

P1: No, like they're kind of like, the thing is like, a lot of these YouTubers were like mainstream, you know chill, like kid friendly. Like packaged up and sold...Now there's going to be another one and they're like packaged up and sold and like given off to the world pretty much.

Year 10, Males

6.3: Discussion

The findings from the previous two studies identified that there was a high level of engagement with YouTuber produced health content among young people (study 1). This content covers a wide range of health topics (studies 1 and 2) and involves the sharing of YouTuber health experiences, the giving and seeking of health advice among YouTubers and their audience, and the communication of certain social norms in relation to health (study 2). However, there remains little evidence which has qualitatively explored young people's engagement with this health content and considered the way in which viewing this content

impacts their health information seeking practices. This study therefore aimed to explore the influence YouTube produced health content had on young people's health behaviours. The findings confirm that young people both search for and encounter health content in their wider viewing and were able to identify both appealing and negative aspects of this content. Young people demonstrated several practical and perceptive critical appraisal skills which appeared to vary with both age and level of engagement with YouTubers.

Where does YouTube health information fit into young people's wider health information seeking practices?

Young people were making use of multiple sources of health information. YouTube content was ranked in a relatively low position of accuracy by all focus groups. However, some young people said they would use YouTube to find health information in certain contexts. Some younger participants said they might use YouTube as a sense-check to confirm their problem was serious enough to warrant advice from a healthcare professional. This largely reflects the existing literature where young people recognise that healthcare professional information is more specific and preferable but still report being more likely to consult personal contacts or online sources (Booth *et al.* 2004; Hesse *et al.* 2005; Rickwood *et al.* 2007). The findings from the focus groups also suggested this was particularly the case for young males, confirming previous research which highlights particular difficulties in accessing traditional health services among this group (Booth *et al.* 2004; Gray *et al.* 2005a). Channel complementary theory (Dutta-Bergman 2004) recognises that young people's use of multiple health information sources is influenced by the function each source serves, namely access to medical expertise, tailorability, convenience and anonymity (Ruppel and Rains 2012). The findings from this study suggest young people were aware that YouTube health information lacked medical expertise but was still convenient due to the immediate and anonymous way in which they could access tailorable, low-cost information (Gray *et al.* 2005b; Best *et al.* 2014).

When discussing types of YouTube health information there were two distinctions identified in young people's discussions. Health information they had searched for versus information they had encountered during routine use, and information produced by or in collaboration with commercial, health or charitable organisations versus unsponsored YouTuber and

amateur content. The existing literature recognises this distinction between young people actively seeking and passively absorbing health information (Gray *et al.* 2005b), and in the context of online information this can also be referred to as instrumental versus non-instrumental use (Papacharissi and Rubin 2000). Health-related mass media campaigns are a widely used example of passive health information which are known to be more successful when exposure occurs during routine media use (Wakefield *et al.* 2010). This suggests that using YouTubers as part of health campaigns could be particularly effective in communicating messages to those young people who are already regular viewers of YouTubers. While some younger participants stated they would prioritise content produced by a familiar YouTuber when searching for health information, the inability of those communicating messages to control which search results are prioritised by YouTube's algorithms (Syed-Abdul *et al.* 2013; Burgess and Green 2018) suggests that YouTuber campaigns are less likely to reach those who are actively searching for health content.

Participants also compared content produced by or in collaboration with commercial, health or charitable organisation, with unsponsored YouTuber or amateur content. Previous research has categorised health information sources in multiple ways including impersonal, professional sources and personal, lay sources (Elliott-Binns 1973; Elliott-Binns 1986; Gore and Madhavan 1993). YouTube health content produced by health, charitable and commercial organisations can be reasonably categorised as impersonal, professional sources. It is less easy to define YouTuber produced health content in this manner. As identified in study 2, YouTuber health content varied from sponsored collaborations with health and commercial partners to more personal accounts of their own experiences, with commercial and community interests interacting on a range of political, social and economic levels (Burgess and Green 2018). However, young people participating in this study on several occasions referred to YouTubers as "*like a big sister*" and "*like my friends*" suggesting they can be viewed as a personal source for some young people. Personal sources of health information are known to be particularly important for adolescents and the influence of peers is known to increase and that of parents wane at this age (Gray *et al.* 2005b; Inchley *et al.* 2017). This suggests YouTubers may be viewed by some people as an extension of peer norms (Lim 2013) and evidence on peer influence suggests young people are more likely to emulate the health behaviours of those they admire (Prinstein and Dodge 2008). Research on

conventional celebrities suggests they can have an important influence on the health information individuals retain due to factors including their perceived credibility, audience conditioning to react positively to their advice and a desire to acquire celebrities' social capital (Hoffman and Tan 2015). From a health promotion perspective, this suggests that YouTubers may be a promising way to communicate positive norms of health behaviour to young people.

However, the link between influence and admiration (Prinstein and Dodge 2008) highlighted above suggests again that these messages are more likely to be effective among young people who regularly view YouTubers and so have developed a level of trust and familiarity (Marwick 2015a; Abidin 2018). Young people's discussion of YouTubers suggested their level of engagement varied and in this study, this was strongest among younger and male participants. For these engaged viewers, their view of YouTubers was influenced by the relatability of the YouTuber and their authenticity. Young males, in particular, were critical of what Cocker and Cronin (2017) have defined as YouTubers' shift from "charismatic authority" to the "routine of charisma", participants described this as "*selling out*" by producing less personal and more generic, commercialised content. This suggests health collaborations must be consistent with their previous health messages as well as their wider tone and persona (Garcia-Rapp, 2016; Abidin, 2018) to be well received by their young audience.

Which aspects of young people's engagement with YouTuber health content are promising for health promotion?

YouTubers appear to be a promising source of health information for young people. However, as the discussion above highlights, the effectiveness of this information appears largely dependent on young people's perceptions of credibility (Gray *et al.* 2005b; Gray *et al.* 2005a). YouTuber credibility was a complex phenomenon for participants which was affected by the sense of rapport felt with the YouTuber, the YouTubers' motivations for creating content and perceived concern about their audience, and this influence waned as young people matured. In order to fully understand YouTubers' potential for health communication, it is therefore important to understand the appealing and negative characteristics of this content from young people's perspective as well as their ability to critically appraise the quality of the content they encounter.

The appealing aspects of YouTuber health content for young people largely echoed those identified in study 2, including the opportunity offered to find shared experiences, the personable tone with which YouTubers communicated and their perceived level of sincerity. This largely reflects existing research. In Grey et al's (2005a) large-scale focus group of adolescents' online health seeking, three issues were found to affect participants' recall and perception of health information: (a) previous experience of the symptoms and source, (b) saliency of the information and (c) the credibility of the source based on expertise, trustworthiness and empathy. Participants also felt YouTuber content could be helpful in raising awareness and reducing stigma towards certain health conditions and issues. Research has shown that stigma, including anticipated and perceived stigma, is an important barrier to help seeking (Clement *et al.* 2015), suggesting YouTubers could play a role in encouraging young people to seek health advice.

Participants also expressed concerns that, by generalising their personal experiences, YouTubers could encourage self-diagnosis, trigger or worsen symptoms. Young people also said they were less likely to find a YouTuber credible if they exaggerated their level of expertise on health-related topics. As previously discussed in chapter 5, despite frequent concerns about the harm that could be caused by biased or incorrect online health information (Eysenbach *et al.* 2002), existing systematic reviews have found very little evidence of direct harm caused by poor quality information (Blessell *et al.* 2002). A frequent example discussed by young people was how the anxiety content produced by YT1 could romanticise the condition for younger viewers thus leading to self-misdiagnosis. The romanticising effect of mass media content for teenagers is one which has been extensively debated internationally. Concerns range from pro-anorexia (Bardone-Cone and Cass 2006; Syed-Abdul *et al.* 2013; Ghaznavi and Taylor 2015) and pro-suicide content found online (Luxton *et al.* 2012), through to the normalising impacts of body image depiction (Perloff 2014) and more general concerns about romanticising and stigmatising mental illness (Rosman 2017; Stafford 2017). However, despite public anxieties there remains insufficient evidence to make decisions about the impact of YouTuber content on young people's health. While the evidence discussed so far suggests YouTubers may have a relevant role in young people's construction of reality, this impact will only be a small aspect of the many social and psychological risk factors, will vary according to video content and audience vulnerability and

may also have a protective or educative effect (Sisask and Varnik 2012; Scalvini and Rigamonti 2018).

These appealing and negative characteristics identified by young people suggest that YouTubers may be most effective in communicating messages about health experiences (for example showing health services, procedures or healthy behaviours) and health-related norms. Young people's concerns suggest they will be less effective in an advice-giving role due to their lack of expertise (unless this is done in collaboration with a healthcare professional). This norms-focused approach has been used by Public Health England in their Rise Above campaign that included YouTuber produced health content among their PHSE resources for schools. The aim of this campaign was to help young people resist peer pressure by using the influence of positive influencers to model their behaviour (McDonald 2018). Participating young people in this study reacted positively to the video they watched from this campaign and younger viewers appreciated YouTubers discussing the issues as they would with friends. No evaluation outcomes have yet been published from the Rise Above for Schools Campaign to measure the impact on young people's behaviours. However, the concurrence with the results of this study suggest that using YouTubers to communicate positive health related norms warrants further investigation.

Young people's perceived ability to critically appraise YouTuber health content was varied across the age groups. Older participants believed themselves to be more measured in their appraisal than their younger peers. This finding agrees with existing studies (Atkinson and Sumnall 2016) and may in part reflect older participants desire to distance themselves from their younger online selves as they make judgements which are more focused on what their online use says about their values (Livingstone 2014). In contrast, younger participants, while aware of some of the complexities of assessing the credibility of YouTuber content, admitted that they could sometimes be misled and appeared to at times make judgements about accuracy based on how trustworthy they found the YouTuber. This agrees with existing qualitative evidence that found young people's judgements on the credibility of online health information is based on a combination of expertise, trustworthiness and empathy (Gray *et al.* 2005a). In addition, at this age young people are increasingly experimenting with the boundaries of risk and acceptability online and this was apparent in the year 9 boys who were

aware that clickbait content from YouTubers was likely to be of dubious quality but they were still curious enough to click on it (Livingstone 2014). This suggests health organisations must collaborate with YouTubers to improve the accuracy of their health messages and also suggests that encouraging YouTubers to explicitly identify indicators of accuracy during their narrative could have an educative effect for younger age groups. However, the differences in older and younger participants also suggest that targeting messages across the 13-18 age category may not be as effective with older teenagers who wish to distance themselves from their younger online selves.

Younger participants, who in general were watching YouTubers more regularly, appeared less accepting and more sceptical of sponsored content with the year 10 male group describing YouTubers who posted a lot of this content as going “mainstream”. In some cases, this included health related content, particularly if they felt the YouTuber was endorsing a particular health message for personal gain (“routinization of charisma”) rather than audience benefit (“charismatic authority”) (Cocker and Cronin 2017; Glatt 2017). YouTubers highly competent self-branding techniques both build trust (Khamis *et al.* 2017; Abidin 2018) and give their audience a sense that they are a custodian of the YouTubers’ channel (Cocker and Cronin 2017). This suggests public health collaborations should target YouTubers whose previous health and wider content is consistent with the messages being communicated and clearly state the intended audience benefits, otherwise they may risk alienating the young people they target. In contrast, among older participants, there was more acceptance that sponsorship was how YouTubers made their living and this was not particularly troubling as long as the content was also entertaining. As van Dijck (2013) claims, for younger people social media can become “an infrastructure they do not question” (p175) and this includes accepting the neoliberal and commercialised infrastructures which underlie YouTuber content. This suggests that for older viewers, education for young people surrounding digital health literacy would be beneficial. The inclusion of a critical media element within PHSE, which equips young people to critique the underlying ideology and ecology of the social media platforms they engage with (Van Dijck 2013), would be particularly useful. This will allow older teenagers, who perceive themselves to be more able to critically appraise YouTuber content, to make more informed decisions about the health information they encounter.

Limitations

As previously discussed, while maximum variation was achieved (Emmel 2013), the focus groups did not exactly meet the desired composition. In particular, mixed gender groups can present some limitations as male participants can tend to speak more frequently reducing the opportunities for females to participate (Krueger and Casey 2015). While the participation of male and female young people appeared relatively equal across three of the mixed gender focus groups, the female participation in one group did appear to be reduced due to male participants (captured in the reflective stop-off above). The focus groups were all recruited from a single county in North West England and so the findings cannot be generalised to other populations. In addition, the focus groups sought to capture young people's perceptions and in cases such as critical appraisal, care must be taken not to overstate these perceptions as indications of young people's skills or behaviours.

6.4: Summary

The objective of this study was to explore the ways in which YouTuber produced health content influences young people's health behaviours. The findings confirm that YouTube is one of many online and offline sources that young people use when making health related decisions. YouTuber health messages were encountered during young people's routine viewing and were considered a convenient source of health information. The findings suggest that collaboration with YouTubers could be promising to communicate health messages to young people as part of wider campaigns or interventions. These messages could be particularly effective if: they focused on experiences and norms rather than advice, remained consistent to the messages in YouTubers existing content, incorporate clear indicators of accuracy into their narrative and clearly elaborate their intention to benefit young people. In addition, the findings indicate that YouTuber content could be used in PHSE lessons to assist educating older teenagers in identifying how commercial sources influence the ideology and ecology of online health information. Finally, the findings suggest that younger teenagers and those who are already engaged with YouTubers might be more pre-disposed to receive YouTuber health messages. There is also some evidence to suggest that YouTubers may be an effective way to encourage young males in help-seeking and this issue warrants further research.

Chapter 7: Semi-structured interviews and netnographic analysis of YouTubers' role in health promotion (study 4)

This chapter presents the findings from three semi-structured interviews with YouTubers and a thematic analysis of the 133 videos included in study 2. This study was initially intended to solely present data from interviews with professional YouTubers, however due to the small number of YouTubers recruited (n=3) this was combined with a thematic analysis of YouTuber videos from study 2 to provide a thicker qualitative understanding. A full rationale for this amendment to the study design is included below. The study objective for the interviews was to explore the role that professional YouTubers themselves believe they play in the communication of health messages. The inclusion of the video data meant this objective had to be adapted slightly to also explore the way in which professional YouTubers present their health communication role in their videos. The data collection procedures from the two parts of this study are described, followed by the results of the thematic analysis and the wider implications of these findings.

7.1: Methods

Data sampling and recruitment

Interviews

A sampling frame for the interview study was developed from young people's responses to the school-based questionnaire (study 1). The sample included: 1) any YouTuber with more than 1 million subscribers who was watched by the questionnaire participants (based on their selections from a list of the 50 most subscribed YouTubers in the UK and free text responses) or 2) any YouTuber that questionnaire participants could remember talking about health content (free text response). This resulted in a list of 112 YouTubers who were invited to participate in the interviews. Invitations were sent to each YouTuber via their public email addresses and to their management companies (where this information was available). Emails included a participant information sheet and those who agreed to participate were asked to sign a consent form before the interview. Management companies were provided with a

gatekeeper information sheet and consent form. Email reminders were sent at two and four weeks. Consenting participants were then contacted to arrange a suitable time and date for the skype interview. Ethical approval for the study was granted by Liverpool John Moores Research Ethics committee (ref: 17/PBH/017).

In total, six YouTubers responded positively to the request to participate, with three going on to complete the interview. The three participating YouTubers had between 5 million and 300,000 subscribers. One was a male musician, the second a male gamer and the third a female lifestyle vlogger. Further details of the interviewees are included in table 7.1 below.

Table 7.1: Interview Participants

Participants	Gender	Age	Channel Type	Subscribers
YT8	Male	31	Music	1 million
YT9	Male	22	Gaming	5 million
YT10	Female	22	Lifestyle	300,000

As the number of participants demonstrates, recruiting YouTubers to the study was challenging. Many researchers have commented on the challenges of recruiting elite populations to interviews (Dexter 2006; Odendahl and Shaw 2011; Bogner *et al.* 2018). Traditionally, elite interviews were undertaken with those in the top echelons of economic and political society (Odendahl and Shaw 2011; Bogner *et al.* 2018) but more recently researchers have begun to consider professional elites including celebrities (Odendahl and Shaw 2011). Recruiting elites can be difficult due to issues identifying them, getting past gatekeepers and accessing exclusive spaces. In addition, interviews with elites are complicated as they can be less open to scrutiny, time constrained and influenced by power dynamics (Odendahl and Shaw 2011; Bogner *et al.* 2018).

The issue of sample size is frequently contested in qualitative research and these judgements are usually made based on saturation and pragmatics factors (Mason 2010; Vasileiou *et al.* 2018). The general consensus from the methodological literature would suggest that the three participants interviewed as part of this study is not sufficient in number to reach data saturation (Francis *et al.* 2010; Baker and Edwards 2012; Dworkin 2012). Insufficient sample size may affect the internal validity of this study, with the phenomena of YouTubers' role in

health promotion not explored in sufficient breadth or depth. However, Vasileiou et al (2018) argue that qualitative research should move away from sample size to consider the broader concept of data adequacy including adequate amounts of evidence, adequate variety in types of evidence, interpretative status of evidence, and disconfirming and discrepant evidence. For this reason, the decision was taken to combine the interview data with additional data from the netnographic study (study 2) on the topic of YouTubers' role in health promotion to present a thicker qualitative understanding (Vasileiou *et al.* 2018). This second thematic analysis of the netnographic data took place after the interviews had been completed. The objective of the interview study was to explore the role that professional YouTubers believe they play in the communication of health messages. The objective of the additional netnographic analysis was to supplement these findings by exploring the way in which professional YouTubers present their health communication role in their videos. The collection and analysis of this data is outlined in detail below.

Analysis of netnographic video data

The YouTuber videos analysed to supplement the interview data were the same 133 videos included in study 2. This second analysis took place after the interviews for study 4 had been completed. Full details of how this data was sampled and collected, drawing on the five steps of netnography (Kozinets, 2015) has previously been described in detail in chapter 5. The sample included 133 videos from seven UK YouTubers with more than 1 million subscribers. Further details of the YouTubers are provided in table 7.2 below.

Table 7.2: Summary of YouTubers included in the netnographic sample

YouTuber code	Gender	Age	Channel Type¹	Number of Subscribers²
YT1	Female	27	How to & Style	11 million
YT2	Male	28	Comedy	58 million
YT3	Male	24	Entertainment	17 million
YT4	Male	21	Entertainment	5 million
YT5	Male	23	Entertainment	8 million
YT6	Female	28	How to & Style	4 million
YT7	Female	32	How to & Style	3 million

1. YouTube allows content creators to select a category for their videos from a predetermined list. The data above is the most common category for the creators last ten uploaded videos
2. Number of subscribers rounded to the nearest million at time of data collection (July-December 2017)

Data collection and analysis

Interviews

The interview topic guide was developed and informed by the conceptual framework and then refined based on emerging findings from studies 1 and 2. The interview began with introductory questions which asked the participants about their channel and how they began on YouTube. Prompts based on the five stages of diffusion theory (knowledge, persuasion, decision, implementation, confirmation) (Rogers 2003) were used to guide the discussion on how YouTubers began making videos on YouTube. The participants were then asked about: health content they produced on YouTube including any collaborations with companies, charities or NHS, health behaviours they shared on YouTube, and their perceived role in health promotion including their role in communicating health information to young people and the impact this health content had on their viewers. A full interview topic guide is included in Appendix M.

Interviews were conducted using Skype. As previously discussed in chapter 3, Skype interviews were chosen because, as YouTubers, the participants were experienced with online video technologies and made regular use of Skype for business use. Skype interviews were therefore felt to be both convenient and an effective way of developing rapport and putting participants at ease (Deakin and Wakefield 2013; Salmons 2015; O'Connor and Madge

2017). Before each interview, the researcher took time to familiarise themselves with each YouTuber's channel (Kozinets 2015) and the topic guide was annotated with relevant examples of health-related content they had produced to prompt the discussion when necessary. The interviews lasted between 20 and 40 minutes.

Given the small sample size and the particular limitations of unrepresentative samples in elite interview research (Bogner *et al.* 2018), the data from these three interviews has not been analysed thematically. Instead, each interview is presented as a narrative vignette and positioned to reflect the themes discussed in the analysis of the netnographic data (discussed below).

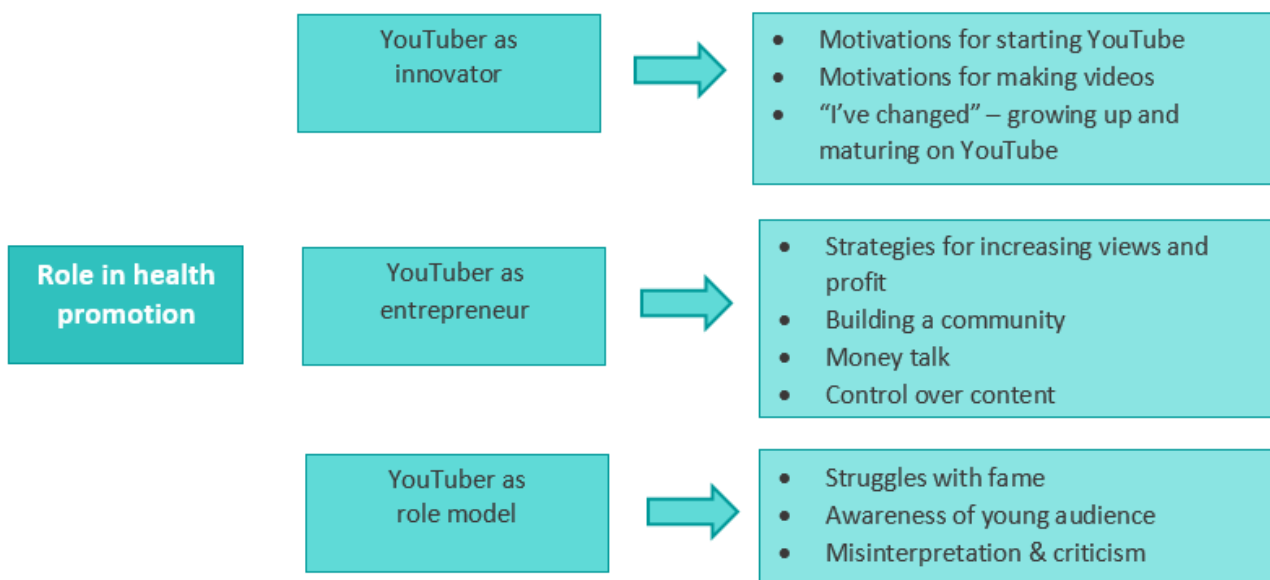
Netnographic analysis of videos

Due to the small sample size achieved, the data from this study has been supplemented with a thematic analysis of data from the 133 videos included in study 2. The role YouTubers play in health promotion was recognised as a frequently discussed topic during the original analysis for study 2 (netnographic study) so the netnographic data was reanalysed following the completion of the interviews. This analysis supplemented the interview findings on YouTubers' perspectives on their role in health promotion discussed with the researcher (interviews), by also considering how they communicated this role to their audience (netnographic analysis) thus creating a thicker qualitative understanding (Vasileiou *et al.* 2018). Initially a deductive thematic approach (Braun and Clarke 2006) was used to identify on-topic data (Kozinets 2015). On-topic data was defined for this study using the interview topic guide and therefore included: how YouTubers began making videos on YouTube; health content they produced on YouTube including any collaborations with companies, charities or NHS; health behaviours they shared on YouTube; and their perceived role in health promotion including their role in communicating health information to young people and the impact this health content had on their viewers.

Once on-topic data was identified, the data were re-read and notes were made on potential codes and patterns that were then reviewed to create a list of inductive codes. All data was coded systematically to these codes, with these codes then being grouped using a mind map

to create a series of themes and sub-themes. Themes and subthemes were created and re-categorised in Nvivo for this process. Themes were then refined, defined and named. The results of the thematic analysis (section 7.2) present an analytic narrative which addresses the study objective of exploring the role that YouTubers perceive they play in the communication of health messages. As Braun and Clarke (2006) recommend, vivid verbatim examples have been used to capture the essence of each theme and allow the reader to see the validity of the analysis.

Figure 7.1: Thematic map of netnographic analysis of videos



Presentation of analysis

This chapter combines the results from the thematic analysis of YouTuber videos (YT1 to YT7) and three narrative vignettes from interviews with YouTubers (YT8 to YT10). The chapter has been structured according to the three themes that arose from the netnographic analysis and interviews. Beneath each theme, the thematic analysis of the netnographic data is presented followed by a box containing one narrative vignette of the YouTuber interview that aligns to this theme. The netnographic analysis and interviews were initially analysed separately, the two sets of findings were then considered side-by-side and it was found that the overriding themes of the netnographic analysis provided a useful classifier for the three interviews. However, thick description of the interview data has been used to allow the reader to make

their own interpretations. The netnographic data is presented before each interview to set the context with a broader narrative of this theme based on multiple YouTuber perspectives (n=7, netnographic analysis) before a deeper understanding of one YouTuber's perspective is presented through the interview vignettes. The findings from the two elements of the study are synthesised in the discussion.

7.2: Results

Overall, the findings suggest that despite the large volume of YouTuber produced health content identified in chapter 5, health improvement will be an unacknowledged role for many YouTubers. Even where YouTubers do acknowledge that they play a role in health communication, it represents only a minor part of YouTubers' core activity. If YouTubers are to be used as collaborators for health improvement activities, it is therefore important to gain some understanding not only of how YouTubers viewed themselves in relation to the health content they produced, but how this role was prioritised and managed. The netnographic analysis of YouTuber content revealed that YouTubers were subsuming numerous roles and facing pressures, which in some cases were unique to their status as an online influencer. Across the YouTuber video content analysed, three common roles appeared 1) YouTubers as innovators: which explored how they grew their channels from infancy and thus shaped our understanding of what a YouTuber is. 2) YouTubers as entrepreneurs: which explored their expansion from filming videos as a hobby to marketing themselves as a profitable brand. 3) Finally, YouTuber as role model: which, as highlighted in the earlier chapters, was an unexpected and in some ways unwelcome product of their fame.

The intention of these themes is not to constrain YouTubers to a rigid typology and all three interviewees combined these roles to varying degrees. However, for the purposes of this study, each interview vignette has been placed alongside the thematic analysis of one role, which was felt to be predominant in their decisions regarding health content. YT8, the YouTube music star, is used as an example of the YouTube innovator who forged a YouTube career in his early twenties as a way to achieve more conventional music star fame. YT9, the Gamer, shows us characteristics of the entrepreneur as he makes strategic decisions to

increase his audience and maintain his brand. Y10, the lifestyle blogger, exemplifies the YouTuber as role model as she experiments with ways of making her voice heard on the channel and grapples with the ethical, moral and political dilemmas of content creation. These roles suggest that our understanding of YouTubers' current health communication practices and their future applications must be mindful of these multiple roles and the unseen labour (Marwick 2015a; Abidin 2018), which is put into maintaining them.

Across these three themes, the ten YouTubers in both the netnographic (n=7) and interview (n=3) analysis revealed the pressures which exist in these roles. YouTubers grappled with the impacts on their personal identity as they struggled with fame, maintaining creative control, misinterpretation and criticism. These pressures give important practical insight into the barriers that limit the creation of accurate and influential health content on the channel as well as pointing towards some possible solutions. The discussion section aims to bring together these insights into YouTubers' roles to better understand their current role in health promotion and potential for future improvement interventions.

YouTuber as innovator

The netnographic analysis revealed that when a number of the YouTubers began on the platform, the concept of "being a YouTuber" did not exist. As illustrated in the quote from YT7 below, these YouTubers began due to a desire to create something as a hobby and they had no expectations of being able to make money or gain fame through the platform. In the early years of their YouTube career (pre ~2010), their role was undefined and there was very little precedence or guidance on what content they should produce. However, for newer YouTubers, their motivations for beginning suggest that they saw this as a viable career decision where they could emulate their YouTube idols. This shows the rapid shift in the platform following the unexpected success of these early adopters. The second quote from YT4, who began on YouTube in 2012, describes how he left full time education to pursue a YouTube career.

"I started [channel name] almost 7 years ago. It started as a blog in 2009 and in fact, it started in this room in that spot just there where the two cushions are just there. On a battered old cream sofa that my dad had given me because, we didn't have any money to buy brand new sofas. And I had an old pink laptop and I opened it up, typed in free blog, and started [channel name]. And at the time it was meant to be a 3 month hobby for the Autumn." YT7_7 (female)

"When I left college, right. To pursue YouTube, I, in my eyes, I was literally the most motivated person on the planet. I had a plan. I knew what I wanted to do and I was chasing a dream. I made so many different types of things. Songs and music videos. Started with short films. Videos that went viral." YT4_10 (Male)

For many of these early YouTubers, their initial motivations were enjoyment. However, for some, beginning on YouTube was also a method of self-expression for those who were struggling due to aspects of their physical or mental wellbeing. In the first quote below, YT5 discusses his experiences with Tourette's syndrome as a teenager and how YouTube gave him something to focus on as he *"wanted somewhere to kind of be like crazy and different and maybe thrive at. I wanted to be good at something"* (YT5_17, Male). YT4, who is diagnosed with depression, highlights that the community he has built through his audience provides reassurance and support when he needs it. YT7 alludes to her own difficult childhood, describing how YouTube helped her create a happy and secure community, which she lacked growing up.

"It was ridiculous that I used to think that I would never get a girlfriend or I would never er get a job or I'd never be happy. My problem probably actually helped me to get where I am today because it made me dive head first into anything I was doing because that was a great distraction and I was diving into positive things at least. I'm sure a lot of people distract themselves with negative things but I was able to dive into YouTube. Into just like working 9 hours a day at like building my channel and I was really lucky that that turned out well." YT5_15, Male).

"But no matter what, the connection we have, the way we interact, the way we can essentially just relate. Yeah, for me is so reassuring. It's just so nice. alright, that's literally, I almost don't want to use that word but it's just so true. I thank you for that. It's honestly like having a friend to talk to and it's that I want to take care of. It's that I want to maintain." YT4_15, Male

"I didn't really think I would ever find happiness like this because I spent so much of my childhood being desperately unhappy. I feel like I live in this strange little glitter world of happiness with my husband and baby and all of you. I always read your comments and I know they're only words on the screen but they mean so much to me. Especially when I'd had [daughter] and I had so many congratulations from you all." YT7_5, Female

Similarly, YouTubers' early motivations for producing health content appear to be prompted by the opportunity for self-expression. However, YouTubers soon discovered that they could have a positive impact on their audiences. Positive impacts mentioned included: increasing their audiences' happiness or wellbeing, reassuring them and increasing their confidence.

While this positive impact was often described as an unexpected outcome, it was presented by YouTubers as a motivation for continuing making videos once YouTubers realised they were having this impact.

"And having 1.1 million of you that have subscribed to my channel I figured things like this could help quite a few people out. And even if it only helps one of you then I'm happy." YT1_16, Female

"I feel like I get to share a large part of my life with you guys and I love that. I love being able to make people happy. I love being able to reassure people. I also love that me sitting here making these videos is able to make a difference in some way. And that isn't anything I thought would happen. I love all the amazing opportunities that I've had and that I get given. I love making friends through this." YT1_9, Female

Consequently, many of the YouTubers were unprepared for the attention their videos received and their resulting fame. This is illustrated in the quote from YT2 who distanced himself from the idea of conventional celebrity saying, in his own words, a *"loser... who plays video games"* would never have had the opportunity to engage an audience of his size through the traditional media. As will be discussed in the section on YouTuber as entrepreneur below, each of these YouTubers have now developed the skills to make financially strategic decisions, which have allowed them to increase their audience and brand presence. However, there is a genuine sense in these stories about their early days on YouTube, that they were thrust into a role they were unprepared for and had a certain naivety about the potential for economic gain and fame. This is illustrated in the second quote below from YT5 who tells the story of a phone call from this stepfather to tell him he had made his first million pounds.

"...somehow I got in this position of being a YouTuber. Erm, I think anyone in traditional media. They're all extroverts. They all feel extremely comfortable in front of a crowd or in front of other people or strangers in general. I'm just a fucking loser from [place name] who likes to play video games. I was never supposed to have an audience and it's been so clear throughout my journey." YT2_15, Male

"But luckily, things kept working with YouTube and I started to do really well... when I was 21 years old, my stepdad phoned me and said, "Hello [name]... what I wanted to tell you was you've just made your first million pounds". And I was like Oh My God, 21 and a million pounds just from doing what I love, this is frickin crazy. "[name], you deserved it. You've worked really hard; you've taken a risk and just be fucking careful alright." (YT5_17, Male)

Another unexpected consequence for YouTubers in the early days of the platform was also reconciling their online persona, as perceived by their audience, with their own personality offline. Many of the YouTubers had started producing content as teenagers or young adults

and their interests and attitudes naturally changed and matured during their time on YouTube. It seemed a lot of them struggled with the expectations of their audiences to continue producing the same style of content and they felt they had cultivated a false persona, which did not reflect their more mature selves.

"Also, another thing, those of you wanting the old [name] or those style of videos. You have to remember I started YouTube when I was 16, I'm now 24 - ok? A lot has changed, like tremendously. I'm simply not the same person I was when I was 16. Like my interests have changed, so much has changed about me." YT3_7, Male

"And I'll tell you another thing with this growing up your mind completely changes [sic] idea, is interests change. In what I do, the entertainment industry, what I find funny and entertaining just completely changes, like it's completely changed. You get to the point where the viewers right they want one thing, they think you're the best at that but that's technically not me anymore. That's me when I was 16, do you get what I'm saying. And that's when this idea of adapting comes in." YT4_15, Male

"I guess the final point, which links back to this is all, is when people say YouTubers have changed. Yes, YouTubers are going to change because they're getting older. I know a lot of the first YouTubers who are doing very well now, they were like 16 when they started and now they're in their 20s. And I think if you've been watching that same amount of time, I'm sure you've changed just as much. Change is great. Without me changing at all, I think my channel would be completely irrelevant by now." YT5_17

Interview with YT8: The Innovator

YT8 is a 31-year-old YouTube musician from Southern England. Unlike the other two YouTuber interviews included later in this chapter, YT8 had begun on YouTube in his early 20s rather than in his teens and had been on YouTube for over a decade. At the time of the interview, he had just over 1.5 million subscribers. YT8 had begun on YouTube as a route to promote his rap music – reaching fame not through his self-produced album but in a rap song critiquing a famous music artist's view on intellectual property rights, which went unexpectedly viral on YouTube. Writing on his blog, YT9 says that following this success he thought, *"Screw CDs then...YouTube is the place where people will listen to me"* (personal blog, 2019). Describing this unexpected attention during the interview, YT8 said he *"started in 2006 as a means to release the music I wrote, I never thought it would be a possible career. My videos were initially stock footage or still images cut to the music. I latterly [sic] made a song about video games that went viral so continued doing so"*. Since this success, he has continued to make satirical rap content about *"videogames, and geek culture in general. Occasionally political or personal rap videos."* YT8 had perhaps become the closest to conventional celebrity of the three

interviewees, producing satirical political and comedy content for national radio and television but YouTube continued to be his main communication platform.

He was invited to participate in the interview study after several questionnaire respondents had mentioned him as a YouTuber who produced health content (free-text question). Before the interview, I began to familiarise myself with his channel and it was not immediately obvious why he had been mentioned for his health content. However, when I began to explore his content a little more, I saw he had produced raps on his body image, self-harm, and his experiences of living with autism and Asperger's. In one of these songs, he describes his experience as *"I'm living with autism, and all the world's a stage for which I never auditioned"* and this line appears an apt metaphor to summarise his experience with the platform. YT8 had used the platform to express his health experiences (along with his other varied content) as a side-line to his attempts at a professional music career and so he was largely unprepared for the audience he achieved.

YT8 was aware of the positive impact this kind of content could have for his audience reporting he received *"Very positive response from viewers in the comments, people are glad that someone is giving these issues voice"*. He said, *"I have had emails from fans telling me that they've decided to seek assistance after hearing my songs, which is immensely rewarding... I've had multiple emails from fans who, after hearing my lyrics about mental health, have decided to be more open about their issues and seek help from friends, family and specialists"*. As a result of this feedback, *"in the most recent video about self-harm I included links in the description to various charities and support groups worldwide"* but it did not appear to have occurred to the YouTuber to direct his audience towards this kind of support content previously. The main feeling from this brief interview was that YT8 was still coming to terms with some of the new demands that his increasingly formalised position as a YouTuber placed him in. When asked if he was a role model for his audience he responded *"Not intentionally but I have realised it seems to be the case! It's making me think more about what I do and say."*

YouTuber as entrepreneur

Analysing netnographic data from across each of the seven YouTubers' careers highlights the change in their content and attitudes, as their hobby gradually becomes their full time career. Each of the YouTubers had moved from DIY celebrity (Turner, 2014) to an influencer (Abidin, 2018) who is cultivating a personal brand by maintaining and growing an online audience. Gradually, YouTubers then advanced from focusing solely on platform-based metrics to broader business ventures, merchandise development, advertising, brand partnership, and appearances in the traditional media.

The most rapid shift in their content was their increased ability to manipulate the technical affordances and cultural norms of YouTube to increase their audience. Many of these techniques such as encouraging their audience to like and comment on their videos and subscribe to their content, video naming conventions and improving the quality and aesthetic appeal of their videos have already been discussed in greater detail in chapter 5. However, it is interesting to observe from the YouTuber perspective how this language of commercialism slowly creeps into their own lexicon and this is illustrated in the quote from YT2 below where he gives advice on how to increase subscriber numbers on YouTube. We see these attitudes slowly progress as YouTubers broaden their focus to wider commercial activities. During the course of this research, YT1 received considerable criticism in the UK press for releasing an overpriced and poor quality beauty and lifestyle product, which was predominantly marketed at children and young teenagers. The second quote below is from YT5 in response to this situation; they defend YT1's decision saying, *"if you were young and someone came to you with that opportunity would you do it?"* and claims, *"people think it's too expensive, that's fine, you don't have to buy it"*. While not immediately related to YouTubers health content, this has important implications as we see YT5 defending the ideals of a neoliberal market. Similar sentiments were often more subtly expressed in the health content analysed in chapter 5, where the emphasis was on the individual taking personal responsibility for improving their own health and wellbeing. This appears a key characteristic of the entrepreneurial YouTuber, to distance themselves from responsibility for their audience's actions.

"But the first thing I noticed was to, this is obvious ...mentioning to people to subscribe at the end of the video. And I know, it's the first thing that I noticed that really helped to bring in a lot more subscribers - if that's what you care about...You're going to have to get it out there for all people to see, bringing in new people and so I did the montages...Super easy to consume, anyone can just watch the whole thing...I spent so much time doing the thumbnails because I realise the impact they have on your video...I sort of see it as, you know, like entering a store. You feel a lot better entering a store with a neat design on the front and you know nice interior design. It doesn't necessarily have anything to do with the product they sell but as a consumer; you feel better entering there right? And I think it's the same thing with YouTube." YT2_10, Male

"...with this [product name], people think it is too expensive; that's fine, you don't have to buy it.... All I want to say is she's an amazing human being who's been extremely lucky, who's worked extremely hard to be where she is today... Would you do the same thing if you were in that position? Would you make a book, would you make a movie, would you make a song? If you were young and someone came to you with that opportunity, would you do it? If you wouldn't, that's fine. But why would you judge people for doing stuff. They're trying things, we should encourage people trying things and making mistakes and that's fine." YT5_17, Male

There also appears to have been a shift over time in the way in which YouTubers discuss the profit they make from their YouTube channels. In earlier videos, they appear reluctant, which appears partly due to a fear of alienating or losing connection with their audience as well as a desire to maintain their privacy particularly from the press. YT5 also discloses that management companies discourage their clients from talking about their earnings. As he rather bluntly puts it *"...basically in the UK, YouTubers get media trained and er we're taught not to talk about money really because people hate people with money in England"* (YT5_19, Male). However, in more recent years, YouTubers appear more open about their earnings. This may coincide with the 2016 changes in advertising law and YouTube regulations, which require YouTubers to disclose sponsored or promotional content on their channels. Increased audience awareness of this appears to have created a dialogue on YouTuber's commercial practices. In some cases, YouTubers appear simply motivated by a desire to be open with their audience (YT7 below). However, many YouTubers appear motivated by frustration wishing to publicly voice how changes in video monetization and algorithms on the channel have reduced their ability to make a profit.

"So if you're thinking what does that mean, you know when you're watching a YouTube video and an ad comes up and you click skip ad, start when ad is finished, or you get those ones that come up at the bottom and you generally just cross off them...Google puts those ads on videos and the people who wanted to put them there, say L'Oréal. L'Oréal might give Google a million pounds to put this, however many ads on this however many videos and then Google will give you a percentage of that." (YT7_13, Female)

As a lot of you may know, YouTube is currently broken as in YouTubers are only getting paid ten percent of what we normally do. Now, in a way, I'm actually pleased about that because it means that the people that actually were just in it for the money without any passion for making the videos and being a creative person - they've gone. Like, they have no choice because that money's not there anymore. But at the same time it is completely like, yeah it sucks for YouTubers because we're essentially not getting paid. So we're having to do other things such as these brand deals and erm you know yeah integrating adverts and stuff like that. Which is absolutely fine, because you know we work so hard to build an audience and make content that brands want to get involved with. Why not work with them - you know? You're not selling out. (YT4_14, Male)

YouTubers' online audience remain vital to the success of their entrepreneurial endeavours. YouTubers are keenly aware that they need to maintain their community in order to succeed and of the precarious nature of their popularity, so YouTubers constantly cultivate a sense of community among their viewers. As explored in chapters 5 and 6, YouTubers frequently use the term community in reference to their audience and use a plethora of engagement strategies including the comment section on YouTube, numerous social media platforms and in-person meet-ups and events to maintain this. Consequently, YouTubers are frequently expressing gratefulness to their audience for contributing to their success. Whilst all celebrities require audience engagement to maintain their fame, the increased intimacy and interaction between YouTubers and their audience appears to heighten this feeling. YouTubers acquired their fame and influence through direct engagement from their online audience and then came to the attention of the traditional media, business and brands because of this rather than vice-versa. YouTubers decisions are constantly influenced by this audience relationship. For example in the quote from YT1 below, they feel they are not permitted to express their feelings about difficult aspects of their role or take a break from producing content. Similarly, YT4 discusses his concerns that making sponsored content will reduce his sense of connection with his audience.

"I feel ungrateful ever saying I don't enjoy the perks that come with doing what I do. It makes me feel ungrateful and I can't help that. And I know there will be so many people that say "of course you're allowed to have days where you don't enjoy being stopped" or "of course you're allowed to have days where you wish people didn't turn up at your house and ask for selfies" and like "of course you're allowed to feel those things" because you never knew they would happen to you. But I still hate saying them out of my mouth. I hate people thinking I'm ungrateful because I am eternally grateful for everything that has come out of doing this." YT1_3, Female

"I've wanted to make this video for so long now but I literally just think it's going to be boring. I literally think that I have just lost complete connection with you guys. Erm, all you're seeing on my channel is: oh, brand videos, ads, like nothing personal. Like nothing honest. Do you know what I mean? And that's pissing me off." YT4_14, Male

Perhaps because of these concerns to maintain their audiences, the YouTubers appeared universally wary about their interactions with the traditional press. As online content creators, YouTubers are used to having control over their own content and they appear unhappy at attempts by the media to retell and re-craft this content for their own ends as illustrated in the quote from YT1 below. In the final quote, YT5 refers to media training that YouTubers now receive from their management companies; in this case describing how YouTubers deliberately avoid discussing their wealth. This highlights the sense of separation that online influencers feel from the traditional media. Similar to their manipulation of the technical affordances of YouTube, entrepreneurial YouTubers are now attempting to use press coverage to their own ends by strategically controlling what information they do and do not share.

"I don't know, I feel like YouTubers and the online space don't see traditional media in that same way. We don't need traditional media to tell a story because we can do that ourselves. So I think sometimes, when I'm trying to tell my story and they go oh this is kind of interesting, let's write about this and it doesn't always spin what I've said in a positive way just to get clicks, it's really weird to get my head around." YT1_3, Female

"...he's been trained, along with me but I didn't take it in as well as you did. He's been media trained to avoid questions about finances. So see what happened there, I asked you a couple minutes ago about your expensive house and somehow we started talking about [name] and how I'm not looking after him." YT5_9, Male

Interview with YT9: The Entrepreneur

YT9 is a 22-year-old London-based male YouTuber originally from Northern England. He describes his channel as *"primarily gaming videos"*. At the time of the interview, he had over 5 million subscribers on his primary YouTube channel and two other subsidiary channels with 3 million and 1 million subscribers respectively. YT9 was part of a YouTube *"team"*, a term used to describe a group of YouTubers who work collaboratively to produce regular content on a team channel (4 million subscribers) and promote each other's individual content. At the time of the interview, he lived in a large luxury house funded by their YouTube careers with three other members of his *"team"*. I took time to familiarise myself with his channel before the interview and his content was primarily gameplay with his videos organised into game-specific playlists. Alongside this, his channel also included vlogs, challenge and Q&A style videos.

YT9 began YouTube when he was 15 years old after *“some friends of mine at school were using YouTube to share some clips of them gaming with like our other friends. I saw this going on. Decided to get involved”*. Describing his channel during the interview, YT9 said, *“I upload on a daily basis and the idea is just for me to have as much fun as I can creating videos. So the idea is just to create videos that are either fun or interesting. Post them out and see who will watch them. There's sort of no real rocket science to it. Or even you know a specific target demographic”*. However, despite this emphasis on his channel being for fun, the interview with YT9 does suggest that he has made some strategic decisions to further his hobby into a career. When discussing his early days on the channel as a teenager playing games with friends, he says he *“saw that people I didn't know were watching the videos and thought hey, how can I make this into a bigger thing? How can I get more people watching my videos and it just continued like that for a couple of years”*. While he said, his channel was *“just something to do. Just a little project”* he does also say that *“just the idea that there were people I didn't know, watching content I'd created and the idea of that was quite alluring.”*

YT9 describes the changes he has seen over the seven years he has been on the platform. He began making videos with *“no equipment. I was kind of using stuff I had borrowed from around the house”* but now, *“as the platform's developed people have ended up with better software, better equipment, better hardware. And that was just the progression”*. YT9 described how during this time his outlook on YouTube had changed slightly as it moved from his hobby to his full time career.

“I've managed to transform it into a career. I've created a kind of opportunities in the real world and that along with it being my kind of job, my source of revenue. Has slightly changed the outlook on it. It is kind of more a career path than just a hobby at this point. But I still enjoy it.”

YT9 felt health content was not something that featured on his channel. He did acknowledge that his vlogs may *“touch on that. Whether it is what I'm eating or your know what exercise you are doing but it is definitely on the lighter side”* and had also done a brand collaboration which featured his training for the commercial endurance event Tough Mudder. In this discussion, he viewed health related content as one of a number of possible avenues for

content that he had simply not chosen to pursue. *“But there are tonnes of opportunities for that, I know channels based solely around that on YouTube. So there’s opportunity out there but it’s just not something we’ve picked as our interest.”* It appeared that YT9 felt this kind of content would not benefit his channel *“I guess it is always good to have that impact on the audience to kind of drive them to live a healthier lifestyle. But again, we never like to preach too much erm, we kind of prefer to be seen doing what we enjoy doing”*.

During the interview, YT9 did discuss some positive impacts his content had on his audience’s wellbeing by providing a form of escapism (*“a lot of viewers kind of use our content as a distraction. Some kind of way to escape the realities of their own life”*) and a way to connect with others (*“a lot of viewers will use it as a social thing. They will watch it, a lot of their friends will watch it...And there’s kind of a community to it and a lot of people become friends through watching our videos”*). He recognised that these positives could alleviate feelings of isolation or provide support for those with mental health conditions, although as illustrated in the quote below this was largely a coincidental outcome of his YouTube content.

People reach out to us or when we meet them in person in events, they will say they have been through tough times and having our videos there is a great way to distract. The way our videos work a lot of the time is, it’s just us as a friendship group just setting up and playing games together and having a laugh. And we kind of invite the viewers to join in on that and feel they’re part of that. A lot of viewers we’ll meet, will have kind of have social anxiety and will struggle to kind of fit in with a friendship group. So they feel like they’re part of ours through erm watching the content and they appreciate that side of things.

He was aware that his content was regularly consumed by highly-engaged younger viewers and recognised the potential role of this type of communication in health promotion. *I definitely think it’s er a great opportunity for those messages to be presented because of the way the audience are engaged in consuming this content. YouTube, a lot of young people do engage directly with the content creator on a daily basis. So when a message is sent by these, well by content creators it is kind of taken to heart much more than any other figure of authority putting across the same message. So I definitely think there is an opportunity there for a kind of effective campaign”*. However, he felt that YouTubers involvement in these kinds

of health campaigns or promotions would need to be highly incentivised. *“Most content creators are busy creating their own content that already engages... there has to be some kind of incentive erm for most creators to focus on something about that”*. He also commented that any promotion done by YouTubers, whether health based or otherwise, had to fit in with the YouTuber’s current content strategy and would engage their audience.

“...when we are asked to put out a message, or promote a product or a brand or a service, we'll look into it and see if it is something we'd use or if it is something we could see our audience using. Do we see a value behind it? And then it would be, from that point onwards, there's a lot of kind of discussions that go into you know putting out messaging that isn't our own messaging in our videos and it just has to really fit the brand and video content... we understand our audiences very well having interacted with them over the years. So it has to either tie in with us or we can see that would fit well with our audience really.”

YT9 was clearly aware of the audience, describing them as *“around 80% male, mostly driven from the gaming point of view and ages ranging from really like 8 to 25. I'd say the kind of key demographic is around 16-18”*. YT9 did agree that he was perceived as a role model and there were some requirements of this role including *“to promote kind of just being a good person”, “always the audience's best interest in mind”* and meet the audience’s desire *“to see real things. They don't want to see someone filtering themselves, censoring consistently”*. However, YT9 did not particularly feel a pressure to regulate or control his content according to his audience characteristics or needs: *“to an extent there is pressure but I've been making content for so long it's just kind of a natural part of it that I don't really have to think about at this point”*. He felt that ultimately, much of what happened to his content was out of his control because *“once content's out there, it's out there”*. The responsibility he could take towards his audience was limited *“because it's such a large audience and you're engaged with them on such a consistent basis that you sometimes can forget that you're a role model to these people”*.

“So the audience has never been majorly in line with our content. We just create content that we can see other people watching or enjoying and then once we put it out we don't really have much control over who watches that content. And then a lot of the time if it isn't appropriate

for certain members of the audience, there's not a lot we can do about that. Realistically, that has to be on the otherside. You know, children who are young who are watching our content, that would be you know someone in their families responsibility to tell them whether they are watching it or not. We don't have much control over that, we just distribute and make the content and YouTube, the rest happens on there."

YouTuber as role model

The term role model is frequently used to describe YouTubers by their young viewers, viewers' parents and in the national press¹⁹. However, all of the YouTubers appeared to feel this role, has been imposed upon them, rather than one they have chosen. This is illustrated in the quotes below where all three YouTubers use the metaphor of being "put on a pedestal" to describe how they had suddenly been elevated to a figure of aspiration and idolisation for young people. In all three quotes, the YouTubers feel unprepared and unworthy to be put into this position and allude to the pressures of this role, which is discussed in detail below.

Like I was put on this pedestal and reminded daily that I was a role model and you shouldn't do that and you should be saying this and you should be doing that. And all those things can be so suffocating that I nearly stopped. (YT1-2, Female)

"All you're doing is putting yourself on a pedestal. It has become so important how people publically perceive you that people will act against what I think they think is the right thing to do because like I said it's more important that people see you in a good light." (YT2-14, Male)

...so on Tumblr...I get a lot of asks, that's like the anonymous posts that people send you. Saying why are you so perfect. And you're my inspiration and you're my idol. And I want to address that and say really? I shouldn't be! Now that's not me being humble... I only want you to say it if you know everything about me and you don't! And you can't. Like I can't give you everything about me via a camera on the internet. And I just want to say to those girls that said that, that's so sweet of you and that's so kind of you but if you're going to idolise somebody I think that we should have a think about who would be best...Don't idolise us. Enjoy us. Enjoy our content. And if you want to interact with us, of course. But I think if you're young, like you're in your teens and you're picking someone to be like someone on a pedestal as a role model and things, look through history at women who have done incredible things. Or science. Or women who have you know defied the odds and done something amazing. Not the woman that you watch once a week that sits in her bedroom on a Friday afternoon and talks to a camera on her own. (Yt7-26, Female)

¹⁹ For example: The Telegraph, Zoella is a great role model 20/10/2014: <https://www.telegraph.co.uk/technology/social-media/11175254/Zoella-IS-a-great-role-model.html>

The Financial Times, YouTube: how vloggers became the new Oprah Winfreys 14/10/2018 <https://www.ft.com/content/7b0dc42c-9a25-11e8-9702-5946bae86e6d>

The Telegraph, Zoella isn't the perfect role model girls think she is 28/11/2014 <https://www.telegraph.co.uk/women/womens-life/11259853/Zoella-isnt-the-perfect-role-model-teen-girls-think-she-is.html>

As discussed earlier in this chapter, there is a sense that YouTubers received little guidance and so were unprepared for their status as “role model”. This has important implications for health-related content as YouTubers were placed in a role they had not been formally trained for and felt their own health behaviours were scrutinised as an ideal when this was not the case. This suggests traditional health promotion messages may be competing with these reluctant but nonetheless elevated non-expert health messages. YT7 discusses this in relation to body image, worrying that by presenting a carefully edited and well-groomed image she was creating a false ideal for her young audience. Similarly, two of the YouTubers had a diagnosed mental health condition and talked about their experiences on their channel. Both discuss how being seen as a mental health role model for young people actually had quite a detrimental effect on their own mental health. The second quote below is YT4 announcing he was taking a break from creating YouTube content (he has now resumed making content but with considerably less frequency). The video is quite difficult to watch, as he appears both visibly upset and angry about the impacts his channel is having on his mental health. This issue is explored further in the vignette below, where YT10 describes how she struggled to be a role model when still coming to terms with her own health problems.

It's now become easy for me to just to give you perfect. Perfect [name]. [name] with her hair done, [name] with her makeup on, [name] with her tan on” (YT7_26, female)

“I don't know man. I just think I need a rest. Like even though I don't upload, like I'm constantly just like driving myself absolutely crazy tryna think of what to do. And I think even that, even though I've got nothing to show for it, I think even just that, I need a break from it... In terms of like putting all this pressure on myself to be something I'm not while my head's not even right, I'm giving it a rest mate. Even though my mum, she's gonna go mental. She says about like not letting it go, I have to be on it, and I know, I just don't have an answer at this point. It's just so, so annoying. Like, I'm believe me, it's so annoying.” (Yt4-7, Male)

Many of the YouTubers spoke of how the requirements to be permanently connected to their audience, receiving constant (often negative) feedback, and reduced privacy had detrimental effects on their overall wellbeing. YT5 says, “*I can tell you now, YouTube, mentally is draining*” (YT5-9, Male) and while YouTubers acknowledged that these negative impacts were not unique to their career, they did feel that they were heightened by the affordances of social media. As YT7 describes “*we... live and breathe social media. Love it. Love it and feel like completely disconnected if I'm not on it. However, there is a downside to it and that is you start to compare your life to everyone else's and start to lose a little bit of reality I think.*” (YT7-

10, Female). By being a role model, they felt they were opening themselves up to increased criticism both from their audience and the traditional media and they had to become accustomed to the constant scrutiny including of their health and lifestyle decisions. As the quote below from YT1 shows, it took time for her to develop coping strategies to deal with this constant criticism. She describes how she had to change her way of thinking and, as illustrated in her second quote, she feels this has improved her overall happiness and wellbeing.

I'm not gonna lie, it took me a good 5 years to not care what people said about me...I sort of stopped caring about what people said. Like I can read it and it doesn't, it doesn't affect me in the same way because I am so aware that there are so many people in this world and so many different life manuals ...It just means they think differently to you and that's not necessarily awful it's just that's the way their mind works. And actually, I don't know them, and I'm never going to meet them, and they don't know me really. They've seen my videos maybe or they've watched one. Or they've seen a tweet and they've made judgement, but they don't really know me. And therefore, I don't attach that same [pause] feeling towards a negative tweet or comment anymore.
(YT1_2, Female)

And it's so easy to listen to the people whispering in your ear "you shouldn't be doing that, you've got to be doing this". And for a while I felt like those little whisperings kind of took over...and I was like "I'm just not going to care anymore". I'm not going to care if my vlog is 30 minutes or it has nothing interesting in it. I'm not going to care if I've, if I've had the most boring day and that's what I chose to upload. I just want to be happy with everything I post and I am. And I can 100% confident and happy when I say that when I hit publish on a blog post, a tweet, an Instagram, a video - I want it to be published. And I think that has really improved my confidence. It's improved my overall wellbeing and happiness.(YT1_4, Female)

YouTubers also often perceived themselves to be the victims of misinterpretation, exacerbated by a lack of understanding about the conventions and context of their content from those not engaged in the YouTube community. As discussed in chapter 5, for male YouTubers in particular, much of their earlier content gave them, as young people, opportunities to experiment and push the boundaries of acceptable behaviour. At the time of posting this content, YouTubers were often using social media in a more personal way and producing content for their growing communities away from wider public scrutiny. However, the searchable and replicable nature of their online content means that as their popularity has increased, this past content has come to the attention of the press. In the first example below, YT3 reflects on recent criticism he had received for misogynistic language in a video he had deleted some time previously. In the second, YT2 (who has received frequent criticism in the press) discusses significant media attention he received after using racist language during group online gaming. It is interesting that in both accounts (and in response to YT2s many other media scandals), the YouTubers claim that in the videos in question they were

playing a character and deliberately creating satirical content but felt this convention of YouTuber content was not understood by the reporting media outlets.

“But yeah, all these news websites literally had me by the balls. And rightly so. This video I’m about to react to, is really bad. So bad it’s not even on my channel. But it’s still on YouTube because whatever you put on the internet stays on the internet.” (YT3_10, Male)

“The way he acted in trying to shut down my video, trying to end my career. That’s when it becomes a problem. Instead of trying to communicate and discuss when these things occur. It often, more often than not it just seems to be er, a train of shame and harassment and attacking er when really it solves nothing to do that.” (YT2_14, Male)

When discussing role models, YouTubers frequently alluded to their younger audience as the focus of this role. However, the extent to which the YouTubers acknowledged and felt responsibility for this young audience was mixed. YT1 was very careful to state that young people were a minority of her audience and that the wide age range of her viewers makes it impossible to create content suitable for all age groups (although on several occasions she makes content which is clearly titled for teenagers). Others appeared to consider their younger audience more consciously and described steps they took to regulate their content accordingly including: not swearing, warnings about sexual content and not partnering with brands they consider inappropriate. For example, in the quote below YT7 discusses how she was approached by a bingo brand to make content but did not accept it because she had concerns about promoting gambling to her young audience.

“Mostly media and some people I think, have this real misconception that my audience is all very young. But it’s not, it’s actually not. My core audience is actually 18-24 but quite a big chunk. I think it can appear younger because most commenters are younger and people that use twitter the most are younger. And meet-ups, events, book signings are mostly the younger audience and people who buy merch are mostly young... I think the younger ones make the most noise, I think that is what I am trying to say. But my core audience is 18-24. So, with that in mind I am so aware that my audience ranges from as young as like 7, which is crazy young, to like people my mum’s age who I know watch my videos or people I’ve met in the street who have their own children who love watching my videos. So, it’s too much of a broad spectrum for me to think about it. When I make these videos, I do not think about who is watching them as regards to age.” YT1_2, Female

“...back when my audience were teenagers, a gambling brand approached me, and it was a bingo brand...who said would you come and make a video about coming to play bingo at one of our bingo houses? Is that what you call them? Bingo places. And talk about how great it was...But I was like, I can't really comfortable advertise it because it is gambling, and there's online stuff and I, what if a young person got really into that and then started doing it more, and more. You know, went down that road. And I was like, although they were offering a lot of money for it, I was like I can't in good conscience say yes to you on that because that just would not suit my brand so I don't think our two brands can mesh.” YT7_13, Female

YT7 actually made the decision to change the tone of her content to reflect her more mature interests (she began YouTube in her early twenties and now is in her 30s with two children). She actively takes steps to direct her younger audience away from her channel saying *“if you are the younger audience, hello! I don't think that I am a children's entertainer or a young teenager's entertainer. So this channel is being a bit older now and I hope that's ok with you. And if it's not that's ok. There are so many channels on YouTube that are so perfect for you.”* (YT7_7, female). By constantly being labelled as a role model, she felt she was often assumed to be producing content solely for a younger audience and thus judged on the appropriateness of her content for this age group. However, this was not an audience or image she felt she had actively sought. YT7 expresses these feelings clearly by saying *“once a mother came up to me at a book signing and said she was so glad her daughter watches my channel, she feels safe with her watching my channel because it's so PC and it's so family friendly and a part of my soul just died a little bit. Because, I'm not that person.”* (YT7_7, Female).

Interview with YT10: The Role Model

YT10 is a 22-year-old London-based female YouTuber who ran a blog and co-hosted a podcast alongside her YouTube channel. At the time of her interview, she had just over 300,000 subscribers and had uploaded just over 150 public videos to her channel. She was invited to participate because several questionnaire respondents had included her name (free-text question) when asked for YouTubers who talked about health topics.

YT10 began creating content on YouTube at 14 years old; documenting the parties she attended with her friends (including alcohol use), but from there her channel grew to *“a diary of my thoughts on personal style, beauty and music”* (personal blog, 2017). YT10's channel is what is broadly termed a “lifestyle” channel where fashion, beauty and occasional self-performed music content sit *“alongside things that affect me as a twentysomething woman finding her feet in adulthood, whether that's feminism, self-confidence, dating, or work-life balance.”* (personal blog, 2017). Before the interview, I took time to familiarise myself with her YouTube channel content and blog. I found a whole range of health related topics discussed ranging from advice on losing her virginity, contraception, a biographical account of her sister's ADHD, body image and her struggles with an eating disorder, self-care and

mental health. While some of this content was clearly labelled in the video title, much of the health related discussion was embedded within other content; for example, a regular segment in which she talked to camera while applying her makeup for the day.

Her best-known health content appeared to be a video (with several accompanying blog and video references) on her difficult relationship with alcohol. In this video, she reflected on her excessive drinking practices during her school and university years: *“like we would get wasted, I can’t even describe how much alcohol I would consume, like bottles of vodka”*. She discussed how she felt unable to drink in moderation: *“when I am in an environment where alcohol is available... it’s like putting a seven year old in a birthday party and saying you can’t have...any of the sweet party food. I am that seven year old”*. Finally, she opened up about the impact this had on her behaviour and relationships: *“I feel as though there’s a monster inside me that just comes out... and it’s not to do with the things I feel ever when I am sober. I just do horrible, selfish things”*. The questionnaire respondents cited this content and after our interview took place, an interview appeared with her about this video and her experiences in the British press. In the video, she describes her motives for making it as: *“there is a huge stigma around it and I am just discovering this now. If you look on YouTube for videos about people who have gone sober or suffering with alcoholism and [sic] there’s hardly any. And so I want to contribute to that pool and have it there in case people need it”*.

From this familiarisation exercise, it was clear that YT10 was a highly articulate young woman whose content appeared to me to be well thought-out and appealing. The most striking aspect was the self-reflective nature of her content; she appeared acutely aware that her audience gave her a public platform and was conscious to craft health content that impacted on her audience in a positive way. This was captured in a video where she described a shift in YouTube culture away from easily consumed entertainment videos to more emotionally open content: *“...more of this kind of ‘open, honest video’ from channels that don’t necessarily do that. Do I think it is a problem? – No. Do I think they are being good role models by doing it? – Yes. Do I think they’d be doing it if it wasn’t currently getting people views? – No.”* In this video, she discussed her need to distance her personal life on YouTube after disclosing her alcohol problem and reflects on the way she curates her personality as a brand. However, despite this she did also acknowledge that being a role model was part of what she did: *“I am a role model and I am fully aware of it. And I know that because I have been told it numerous*

times by numerous people who consider me a role model... do I think of myself as a role model? Yes I do. That is partially why I present the types of content that I do, like advice videos." It is therefore perhaps no surprise that YT10 is presented here as an example of a YouTuber as a role model. Given her publically available reflections, I was keen to discuss this topic with her in more detail particularly in a health context.

During the interview, YT10 was very open about the fact that she produced health-related content. She said her main topics of focus were mental health, body confidence and alcohol and that her content was generally prompted by what she was experiencing at the time. When I asked her why she decided to speak about her experiences online, she responded:

"I was experiencing those kinds of issues and I wasn't finding enough people online, which was my number one source of finding information... who were also talking about it. Especially from the perspective of a young girl. And I think I was 17 when I first started talking about food and my relationship with food. So yeah, at that age I was definitely finding that...in my age group, everything was really binary. There was being told to ask about eating and food and no one really knew what was good and what was bad. It was either you have a disorder or you're fine. And there was a very big middle ground...that wasn't being talked about so I thought with my videos I could try and talk about the middle ground".

It is interesting to note in the quote above, that for a then 17-year-old YT10, online resources such as YouTube where her *"number one source of finding [health] information"* and the lack of relevant information prompted her to create her own. This was also touched upon later in her discussion when I asked whether at the time of her alcohol video, she felt she had sufficient awareness of the health professional support open to her. Her response once again highlights the necessary and complementary nature of online health sources: *"Yeah, those options were open to me. The support of professionals but yeah it was more, yeah again, a sense of like loneliness and a sense of fear I guess that I was experiencing on my own"*.

However, she said that since producing this content she had become aware of the difficulties this posed for her as an individual: *I think that by leaving my arms wide open...I also open myself up to a lot of criticism and I make myself quite vulnerable...I have to really limit how*

much I can do that. Because, for my own sake, for my own mental health. YT10 felt that some of these difficulties were amplified by the online nature of her content, in particular that she was open to the public scrutiny of individuals with a wide range of views who could accidentally or deliberately misinterpret the nuances and context of her experiences. "It is kind of the double edged sword, when people start to perceive you as a role model, you can never do enough to please them. So while I do my research...give disclaimers and say you know this is a lot, this is my opinion. Unfortunately...the way that the internet sees everything lacks a lot of nuance, so, yeah I can never do well enough and I do get a lot of criticism for talking about these issues as well now."

When asked to describe what she thought people meant when they described her as a role model, YT10 defined it as *"someone that...they feel that younger women can look up to. Erm, and it implies as well I think that I'm reliable and that I'm authentic and that I'm setting a good example."* However, while YT10 accepted that she was now in this role model position, she had not chosen or anticipated this role when she began making videos. As she said, *"knowing what I know now about the unintentional responsibility you take on by people kind of framing you as a role model, no I wouldn't have chosen to be one."* In particular, she felt this role model status should not be attached to her content on alcohol as she felt she was still coming to terms with her own experiences and did not have the expertise to advise others.

Quickly, I should probably mention about alcohol. About being a role model about alcohol as well. I get a lot of criticism and flack for not being sober... like I always make very clear that I don't know what I'm doing either. I just needed to talk about my relationship with alcohol for, for myself, but also for anyone else struggling and I didn't ever want to be a role model in that sense. However, a lot of people did claim that it doesn't matter that I have become a role model for it for young women. And that is really scary because I don't know anything. Do you know what I mean. I'm more there to provide comeraderie as opposed to fit into a role model role. So that is really scary because I don't want to be a role model at all for alcohol. I'm not one.

YT10 was able to give examples of contact from her audience telling her that the content had helped them recognise a health issue in their self and improve their mental health or wellbeing. When speaking of her alcohol related content, she said *"I get loads about alcohol*

from women who are my age or younger or older and start to realise that they have a problem and they say they found my video and it really helped them realise that there is something wrong". YT10 acknowledged that she felt "grateful to be in a position where my opinion is valued by young women" and that receiving these kinds of messages from her audience "make it worth the experience of having posted anything about my own experiences online. Because it's clearly really helped a lot of other people". When I asked YT10 why she felt her alcohol content was appealing to her audience, she felt this was mostly due to her meeting a demand for online content that wasn't previously available: "I just think I haven't found anything else they relate too. I don't think that I am more relatable than anyone else because I say things in a different way. I just think they were desperately trying to find something and they came across it. And so I think it is because there are so few resources for people who are struggling with alcohol but aren't necessarily addiction, so it just strikes a chord."

However, despite observing positive impacts for her audience, YT10 felt for her as an individual being viewed as a role model produced more pressures than benefits. She felt that being open about her experiences with alcohol, mental health and disordered eating; she opened herself up to criticism, which made her vulnerable. When discussing her alcohol video she acknowledged, *"I am, now a lot more vulnerable online. It's something that comes up very high up if you search for my name...it is one of the first things that people find out about me unfortunately. Because I don't really think it's very reflective of my whole personality as I'm sure most people with a mental illness don't. Or people with any kind of issue with alcohol or narcotics".* She joked that *"the first thing my mum said to me when I told her I made that video was oh my God; you're never going to get employed again."* However, reflecting back on the experience, she felt it had also had negative impacts on her wellbeing particularly at a time when she was trying to come to terms with her problematic drinking. *"It wasn't necessarily very good for me in my mental health because it left me feeling very vulnerable and er open and I think that again opens you up for a lot more criticism. And a lot of people, I think a lot of people just claimed I wasn't ill and I think that was very hard to deal with".*

YT10 felt that sharing health related experiences online made her particularly vulnerable due to both emerging cultural norms in the online community and the affordances of YouTube itself. She felt both of these factors combined to allow extreme opinions on health and

lifestyle to dominate discussions on the platform in a way, which had not been the case in the past. Describing the culture of YouTube, she said “, *I think the thing at the moment that is happening...especially in terms of...people talking about health online is kind of a culture of outrage developing...people are way more vocal about seeing things in a very binary way when it comes to arguments on what is right and wrong about let's say diet, or health or mental health. And er there's a, quite a strong call out culture at the moment,...you really can see it on YouTube just in people's lifestyle choices. Lifestyle choices really do get heavily critiqued now on the platform in a way that's only really developed in the past couple of years*”. YT10 believed these strong opinions were assisted by the mechanisms of YouTube's comment section. “*So it's a vocal minority, however the way that the comments section works...is that comments get up voted...and then they gain momentum and that means that if there's one critical comment on something and it gets, let's say 5 thumbs up, it will continue and it will spiral and more and more people will comment that particular thing. And so it can go from being a vocal minority to being a vocal near majority very fast*”. YT10 said that, for her own mental wellbeing, she felt it was necessary to develop strategies to protect herself from this criticism including asking a friend to review her comments and using YouTube tools to filter out certain words.

“But again you have to find ways of protecting yourself. And not reading comments or getting a friend to moderate them. Or censoring words. It's good that YouTube has the tools to enable you to do all that...I block very er kind of blanket words like fat, no-one can say the word fat on my comments. And then I block more slurs, like racial and homophobic slurs. And I don't know, just any other words that I don't think would be conducive to a good, healthy comments section or healthy discussion.”

As well as the personal pressures of being elevated to a role model status, YT10 was also aware of the risks to her audience. She felt that she was afforded a level of health expertise that she did not necessarily have: “*I'm also, without even trying, being seen as knowledgeable and as an authority on something which I'm just not*”. There was a risk “*that I could get blamed for someone making a poor decision or a decision that wasn't best with them. And I worry as well, because I am so naive to my own relationship with alcohol, that I could unintentionally encourage erm a behaviour that later on in my life I realise wasn't healthy*”. In order to address

this risk, YT10 said she tried to avoid as much as possible presenting herself in an advice giving role by limiting her content to her own experiences and signposting to appropriate sources of information.

I completely avoid acting as though, I really try to avoid the older sister role now or I don't know, kind of the informative side of thing unless it's literally I could, unless I could provide sources of information in the description box. I would avoid that entirely because I don't think I am an authority on pretty much anything [laughs]. Unless it's actually YouTube itself. I don't think I could claim to be an expert in anything of health information nature.

I asked YT10 if companies or organisations with requests to collaborate on health related content had ever approached her. She gave a range of examples including: mental health charities, a healthy eating campaign from a large UK supermarket and, what she described as “very generic Instagram girl things” such as gym wear, smoothies, skinny teas and cognitive enhancers (“brain boosting powders”). She described (quoted below) how she would usually receive promotional material on the health topic in question which would include key phrases and facts and hashtags to promote but that this information would usually be quite basic. When I asked if she would do any self-prompted research on the topic she replied, “I tend not to research it so much. I'll check out the organisation and see what they're doing. Where their money is going. If I can do that obviously, if it's a charity. But other than that, no I don't do that much research”.

“...so you'll get kind of buzzwords, so let's say I was posting an instagram. I would be sent a brief with like key phrases and facts and buzzwords and hashtags and stuff. You know all of the marketing piled into one. But that usually includes facts or even myths that they want busted about mental health or about I don't know disordered eating. I don't know, there is usually a bit of fact in there that you are asked to consider quoting. And that's usually it, it is very basic information”

She described an experience a few years previously when she had (what she now perceived to be somewhat naively) mentioned a skinny tea product she had been sent. This experience seemed to have changed the way she approached health related brand promotion, as she

said, *“since experiencing that I don't promote them and I never would. I think it's, it's not reliable. It's not ethical of me to promote to my audience something that really, really doesn't work. No matter what financial incentive there might be”*. This led me to ask her what influenced her decision making process when accepting these kinds of collaborations. As the quote below illustrates, her decision was affected by multiple factors including her ethical responsibilities, the commercial aspects and how the promotion fitted in with *“my brand and what I do”*. In this quote we see YT10 negotiating the balance between the responsibility of health promotion and the necessity of self-promotion.

I think I'll consider erm how it will erm, how it will reflect on me as a personal brand. How it will reflect my audience. How it will affect my audience. Will they like the content I could make? What kind of content can I make? How much like creative control will I have? And obviously the fee as well. Those are the things that affect whether I take a piece of work. And then especially when it comes to er work on mental health, or health or diet, whatever. All of those. The priority will be the ethical stance on it. And what I am actually showing my audience, and encouraging them to do, if anything.

From this discussion, it was clear that YT10's decision-making was affected by the impact her content had on her audience. I was interested in whether the young people in her audience had any influence on this, particularly as she had repeatedly used the phrase *“role model for young women”* during our conversation. YT10 said that *“92% of my audience is women who are aged I think 13-25”*. She was conscious to make content that this audience would find entertaining *“I do think about what my audience want to see and what I enjoy as well because I'm obviously within my demographic”* but that *“ultimately I make the videos that I want to make and my audience will curate itself and subscribe and unsubscribe as they please”*. However, when it came to this young audience she said she did not necessarily feel any kind of responsibility to curate or filter her content in any way (quoted below). She felt as long as she was presenting herself with integrity her audience would find, interpret and make use of her content as they saw fit. Equally, the feedback she received from viewers about her content appeared to focus on being *“a role model and so I should be doing the absolute best I can. So it's not necessarily about the age of the audience it's just who sees me as influential”*. When it came to health content, *“a lot of these health issues are seen as moral issues... or*

seen as like, they're very heavy and they're very emotionally weighted and I think a lot of people because they're so personally affected by them, project their feelings onto the person talking about them” and this appeared to be a greater concern to her and her audience.

Yeah, I don't feel a responsibility towards those younger in my audience. I meet a lot of them erm and I was once one of them and I distinctly remember when I was younger, I would watch and consume media that was above my recommended age range. And with the internet I think I have a responsibility to be, again, I would say like a good role model but in that sense I mean, er I mean to be er open and open for discussion and to show myself apologising if I get something wrong. Those kind of elements I think are me setting a good example. Not necessarily whether I swear or not, or expressing my opinion on something. I think it is better to show I am open and ready to be corrected and be, you know have those discussions and being, I don't know yeah, open to changing my ideas. I think for me that's the most valuable thing that I can offer to a younger, a girl that's younger than 16 in my audience... you're going to have certain opinions that you got from your parents at that age that's cool you know [laughs]. You know there's so much development yet to do and I don't want to be the person who imparts their opinions intensely into another human being. I don't know [laughs]. Also, if they're watching me, it's all an echo chamber anyway, on this part of the internet. So if they found my channel and they're still around, chances are that I'm not really impacting on what they are agreeing and disagreeing that much. [laugh]

7.3: Discussion

The previous three studies confirmed YouTubers were a frequently used source of health information for young people (studies 1 and 3). The content they produced was extensive, varied (study 2), and appeared convenient and appealing for young people (study 3). Viewing a YouTuber with a shared health experience was particularly valued and influenced by the perceived authenticity of the YouTuber in question (study 3). YouTuber produced health information involves the sharing of health related experiences and norms (study 2). However, YouTubers appear more cautious giving health advice and, when given, this advice was usually framed around the neoliberal concept of individuals taking personal responsibility for their

health (study 2). These findings suggest greater understanding is needed from the YouTuber's perspective on their potential role in health improvement. In particular: are YouTubers suitably prepared to communicate health information to their young audience and what steps need to be taken to facilitate effective collaboration between YouTubers and public health organisations?

The findings from this study revealed that YouTubers inhabit multiple roles and three of these roles: innovator, entrepreneur and role model were the focus of this chapter. It is first important to note that in defining these roles, the intention is not to restrict YouTubers to a rigid typology. Just as Abidin (2018) argues when presenting her qualities of online influencers, YouTubers may enact a combination of roles. The transition between innovator and entrepreneur was often a temporal one. YouTubers who had been on the platform for a number of years gradually transition from experimental YouTube innovation to a more seasoned entrepreneur who is strategically managing their content. This appears similar to Abidin's (2018) structural changes from "micro-celebrity" to "internet celebrity"; as a niche hobby filmed in an individual's bedroom moves to a global vocation that attracts attention in boardrooms. The role model role was less defined. All of the YouTubers accepted this role, which was often assigned by their audience or other external parties. However, the extent to which YouTubers accepted and took on responsibilities as a role model was varied. Each of these three roles highlight YouTuber characteristics and practices, which are important when considering their potential for health communication and improvement.

Are YouTubers well prepared to communicate health information to young people?

In the early stages of their YouTube career, YouTubers' discussion of health topics was motivated by a need for self-expression or being unable to find information they needed online. It was only once they started to receive positive viewer feedback on this content that YouTubers realised they could have an impact on their audience. The concept of opinion leaders is one that is frequently used in community health improvement. While it is found in a number of theories and frameworks, it is most often associated with the diffusion of innovations model which focuses on how new ideas and practices are adopted and spread between communities (Rogers 2003). Valente and Pumpang (2007) highlight several functions

of opinion leaders, which can assist in the implementation of health promotion 1) they allow change agents entrée to the community and legitimation 2) they provide communication from communities back to agencies 3) they act as role models for behaviour change within the community 4) they can convey health messages and 5) they act as the “capital” left after an agency has withdrawn from the community. While most of the evidence on opinion leaders draws on research in community settings, there is emerging evidence to suggest it is also applicable in online settings. For example, McCosker’s (2017) work on an Australian mental health forum has demonstrated how peer mentors can take on many of these roles in an online setting. Similarly, YouTubers may also conform to these expectations of opinion leaders, particularly as community and role model are concepts which they already engage in.

Interestingly, those who are most likely to be opinion leaders, although ahead of the majority, are not necessarily the quickest adopters of an innovation (Valente and Pumpuang 2007). Instead, opinion leaders tend to take time to observe the climate of opinion and wait until both advantages and changing norms are apparent before exerting their influence. There are parallels between opinion leaders and the practices of entrepreneurial YouTubers. YouTubers in this study described how they would consider strategically the appeal and impact of making certain content on their audience before proceeding. As YT9 says, *“we understand our audiences very well, having interacted with them over the years”*.

A key characteristic of the entrepreneurial YouTuber was their ability to create a sense of community among their audience. They make use of increased opportunities for interaction and intimacy afforded by social media to ensure the continued success of their endeavours. Abidin (2018) argues that YouTubers are so successful at building this sense of community because they present elements of their everyday life *“with such candor and insight...that a sustained social relationship based on a sense of community and trust is fostered as ‘social capital’”* (p33). This regularly sustained interaction allows likeminded viewers to congregate and builds up trust and familiarity, which allows YouTubers to recommend and endorse other persons, products, or services (Abidin 2018). There is evidence to suggest that celebrities can have an influential role in communicating health information (Noar 2006; Beck *et al.* 2014; Brennan *et al.* 2016) but the success of this is influenced by how well the community or target

audience identifies and values them (Valente and Pumpuang 2007). YouTubers success at community building suggests they could be influential health communicators.

The majority of YouTubers included in this chapter had been referred to as a role model either by their audience or in the media¹⁹. The term role model is quite casually used in both public discourse and community based health improvement (Gauntlett 2008; Armour and Duncombe 2012). It is loosely defined as an inspirational individual or someone who sets an example (Gauntlett 2008) and has quite broad parameters with family members, peers, teachers, athletes and celebrities all considered potential health role models (Martin and Bush 2000; Armour and Duncombe 2012). Role models are believed to be particularly effective in health improvement with children and young people because their perceived similarity (Bandura 1995) means young people can identify with them and thus deem their behaviours worthy of imitation (Brown *et al.* 2003; Armour and Duncombe 2012). Through role models, young people can be introduced to imagined or possible selves (Armour and Duncombe 2012) which is linked to the development of social capital (Rhodes 2004) and the reinforcement of prevailing societal norms (Biskup and Pfister 1999). A longitudinal review of celebrity health narratives found they could be inspirational, educational, bring health issues to public attention and inspire activism (Beck *et al.* 2014). Many of the existing health interventions using celebrity role models have focused on using professional athletes to increase physical activity participation and have found evidence of increased confidence and self-efficacy among young people (Inoue *et al.* 2015).

However, while role models have been used in community health interventions under many guises (such as health champions, opinion leaders and mentors, (Armour and Duncombe 2012)), how these role models are effective remains under theorised and under-researched (Gauntlett 2008). Social learning theory (Bandura 1977) is frequently used to describe how individuals can learn both discrete behaviours and complex behavioural patterns by imitation. Learning using role models is an important part of this process as individuals can be guided to ways of behaving without having to test this behaviour themselves in various situations and conditions. However, this theory has been critiqued due to the lack of complexity with which it explains the processes involved (Gauntlett 2008). It does not acknowledge that the process of learning from role models is reciprocal. Young people do not only have their concept of

self influenced by role models but also choose role models who suit them. They are also selective, appropriating certain elements of role models and positioning themselves in relation to negative characteristics (Biskup and Pfister 1999; Armour and Duncombe 2012). This highlights that young people are not as gullible or vulnerable as often suggested, but rather recognise that individuals do not need to be flawless to be a role model (Biskup and Pfister 1999; Lines 2001; Gauntlett 2008). This was reflected in YouTubers' discussions of the various facets of being a role model; they recognise the influence they can hold but also claim young people who have found them online will have chosen a role model that already reflects their personality and experiences. For example, YT10 who feels as a role model she is someone *"that younger women can look up to"* emphasises the reciprocal and selective aspects of this process when she says *"I think it is better to show I am open and ready to be corrected...open to changing my ideas. I think for me that's the most valuable thing I can offer to a younger [girl]"*.

What steps should be taken to facilitate effective collaboration between YouTubers and public health organisations?

Given that YouTubers are effective in building a sense of community among their audience and fit the expectations of a role model, it appears they have considerable potential for communicating health improvement messages to young people (Valente and Pumpuang 2007). However, the success of YouTuber health improvement is not only dependent on the promise of effectiveness but also requires willing participation from YouTubers themselves. The findings from this study suggest many of the YouTubers were reluctant health role models who were placed in a role that they had not chosen. Despite acknowledging the positive outcomes of their health content, their discussion of this role was mainly characterised by challenges. YouTubers were concerned that sharing their own health narratives opened them up to scrutiny, misinterpretation and criticism in an area where they claimed no expertise. In particular, YouTubers discussing issues such as mental health, problematic drinking and eating disorders felt pressured to set a positive example for their viewers when they were only just learning to cope with these issues themselves.

Public scrutiny is an acknowledged risk of celebrity health promotion. If a celebrity's health

behaviours contradict the message they are endorsing, this will decrease the effectiveness of the message (Erdogan *et al.* 2001). This appears heightened for internet celebrities (Turner 2004) whose sustained and immediate contact with their audience means they feel an increased sense of obligation towards them and a need to maintain authenticity (Abidin 2018). These blurred boundaries between YouTuber and audience mean their health narratives can become co-constructed as something that is simultaneously private and an emerging public dialogue (Beck *et al.* 2014). It is therefore important that if YouTubers are going to be involved in health promotion activities, they are educated about both the health behaviour they are supporting and their responsibilities as an opinion leader (Valente and Pumpuang 2007). In addition, there needs to be continued support for YouTubers once the health message has been communicated. YouTubers will receive immediate and plentiful feedback from their audiences and this will require support from public health agencies to respond accurately and effectively. This could be achieved through measures such as collaborative comment monitoring or live streaming sessions. Live stream methods have the added appeal of increased authenticity through “calibrated amateurism” and receiving immediate audience attention through fear of missing out (FOMO) (Abidin 2018). If public health agencies withdraw support too quickly, they lose the capital the YouTuber has afforded them within their community. It also creates a risk of the messages being appropriated and retold by the media for their own ends (a process Abidin (2018) terms “weaponised micro-celebrity”) thus potentially decreasing the effectiveness of the message. This suggests that one-off videos in which YouTubers endorse health messages may not be as effective as sustained, co-ordinated campaigns and this is elaborated on in further detail in chapter 8.

YouTubers in this study were aware of their young audience. Some reported self-implemented restrictions on their content such as refusing brands that were unsuitable (for example: gambling, weight-loss products) due to the ethical implications of promoting them to younger viewers. However, the overriding sentiment from YouTubers was that “*once their content was out there*”, it was their young audience’s responsibility (with parental support as appropriate) to filter in and out of this content as they saw fit. YT10 agrees with Markham’s (2014) claim that the viewers who have found and watched her YouTube content will already be instinctively predisposed to recognise certain symbolic forms and categories. This suggests the need for care when selecting which YouTubers to involve in health communication. In his

interview, YT9 stated that while he could see the value of YouTuber health content, it was not something he had ever pursued because it did not fit with his brand and audience. In contrast, a number of the YouTubers (YT1, YT4, YT5, YT7, and YT10) had chosen to make health content without any prompt or partnership. Furthermore, YT7 and YT10 discussed how any financial incentive to make this content was balanced with their own ethical responsibilities. This suggests that while it may be tempting to focus on recruiting YouTubers with the largest number of young subscribers to health promotion efforts, it may be more effective to focus on YouTubers already producing this kind of content, as their audience will be more predisposed towards receiving these messages positively.

Another key aspect of YouTuber produced health content was profit making. Normal practice for YouTubers was to receive financial incentives for promoting health messages just as they would for other forms of promotion. They also expect to retain autonomy over how they communicate these health messages. Recruiting YouTubers to health promotion campaigns may be costly (Valente and Pumpuang 2007) and thus attract public criticism (Austin and Seitanidi 2012). The Australian government recently launched an investigation into a national physical activity campaign for women that had used \$600,000 of public money on Instagram Influencers. The campaign was heavily criticised in the media firstly for using influencers who had also participated in alcohol brand endorsement, and secondly without evidence on the effectiveness of their influence²⁰. This highlights the lack of robust evidence on the effectiveness of YouTuber health communication in achieving the required outcomes among young people. Despite their promise, the cost implications of these partnerships mean public health agencies must be cautious about investing in these campaigns without first establishing evidence of their effectiveness through smaller scale piloting. It also suggests that more cost-effective alternative measures should be explored, for example expert reviews of existing YouTuber content would identify high quality videos which can be used in young people's health education for example through school PHSE lessons. In addition, increasing young people's digital literacy skills through school and community based education may equip them to engage more effectively with the YouTuber health content they are already

²⁰ <https://www.abc.net.au/news/2018-07-20/health-department-investigating-instagram-influencer-campaign/10016712>

watching.

Limitations

The limitations of this study must be acknowledged. Most noticeably, the small sample of self-selecting YouTubers recruited to take part in the interviews (n=3) means data saturation was not reached (Baker and Edwards 2012), impacting on the internal validity of this study. In order to address this small sample, data from two sources: semi-structured interviews and a netnographic analysis of YouTuber videos were combined in this chapter to provide a richer qualitative understanding of the issue. While combining data in this way increased the adequacy of the data by providing greater variety (Vasileiou *et al.* 2018), the differing circumstances in which the data was produced must be acknowledged.

7.4: Summary

The objective of this study was to explore the role that professional YouTubers themselves believe they play in the communication of health messages. The findings demonstrate that several elements of YouTubers' practice including cultivating a sense of community among their audience and being perceived as role models mean they are well positioned to participate in young people's health improvement. However, suitability is not an indicator of YouTubers' willingness or effectiveness to participate in health promotion. The findings from this study suggest public health organisations wishing to collaborate with professional YouTubers should target those who are already engaged in producing content, provide education, and continued support to assist YouTubers in taking on this role. This study also suggests that YouTuber collaboration is influenced by a varying sense of responsibility towards their audience but consistently involves financial incentive and autonomy over the content created. The potentially high cost of YouTuber health improvement collaborations suggests that piloting these interventions first are essential to establish their effectiveness. In addition, the development of frameworks to establish the accuracy of YouTuber health content may assist both educators and young people in using this health information more effectively.

Chapter 8: Discussion

Introduction

The previous four chapters have described the findings from this research through a statistical analysis of a questionnaire on young people's engagement with health information on YouTube (study 1), a theoretically driven thematic analysis of YouTuber produced health content (drawing on netnographic principles, study 2), a data driven thematic analysis of focus groups with young people discussing YouTubers and health content (study 3) and a case study approach to semi structured interviews with professional YouTubers (supplemented by data from the netnographic study, study 4). Each respective study was concluded with a discussion that compared the findings to the existing evidence base, identified promising and challenging aspects of YouTuber health content production and highlighted areas for future research. The aim of this chapter is to triangulate the findings from these four studies to produce a deeper understanding of the role professional YouTubers play in young people's health behaviours in the UK.

The chapter begins with a description of the triangulation approach and process. The results of the triangulation are then presented thematically according to research objectives 1-4 to highlight where there is agreement and dissonance between the four studies. The results of the triangulation are then synthesised to consider the potential contribution YouTube can make to the development of health improvement interventions for young people. The strengths and limitations of the study are also considered.

8.1: Triangulation approach and process

As previously described in chapter 2, Farmer et al's (2006) triangulation protocol was used to triangulate the findings from the four studies. Firstly, the results of each study were re-read and a list of themes created (a summary table of these themes is provided in table 8.2). These themes were then sorted into a convergence matrix and the theme was coded against each study to show whether the study findings agreed, partially agreed, were silent or demonstrated dissonance in relation to both theme meaning and prominence, and coverage.

Farmer et al (2006) describe this step as “*compar[ing] the findings to determine the degree of convergence of (a) essence of the meaning and prominence of the themes presented and (b) coverage and specific examples provided in relation to each theme*” (p383). A definition of each level of agreement is included in Table 8.1 below.

Table 8.1: Convergence coding scheme (Farmer et al, 2006)

<p><u>Agreement</u>: The study agrees with the theme in terms of both meaning and coverage within the study</p> <p><u>Partial Agreement</u>: There was agreement in the study on either coverage or meaning but not both</p> <p><u>Silence</u>: The study found no evidence on the theme</p> <p><u>Dissonance</u>: There is disagreement between the sets of results on both coverage and meaning</p>

After this process the full list of themes was reviewed to identify study specific themes that could be combined or simplified. Braun and Clark’s (2006) guidance on collapsing themes was followed to ensure that the collapsed themes cohered together meaningfully and that there were clear and identifiable distinctions between each theme in the final matrix. The themes were then mapped to one of the four PhD objectives: 1) quantifying young people’s engagement with the health-related content produced by professional YouTubers 2) examining the ways in which health information is communicated by professional YouTubers 3) exploring the way in which these health messages influence young people’s health behaviours 4) exploring the role that professional YouTubers themselves believe they play in the communication of health messages. These objectives have been used to structure this chapter with the coding matrix divided so that each theme is presented beneath the objective it was mapped to. The final objective (5) of this research was to consider the potential contribution YouTubers can make to the development of health improvement interventions for young people and this objective is used as a final heading to synthesise the findings from the triangulation.

Ensuring rigour during the triangulation process

In order to ensure that the interpretation of the triangulated findings was rigorous, Onwuegbuzie and Johnson's (2006) nine forms of legitimization were applied to the research findings (summarised in table 8.1 below).

Table 8.2: Legitimization process for mixed methods findings

Legitimation Type	Application in research process
Sample integration	Despite not being a subset design, young people participating in study 1 and study 3 were recruited from the same schools. The responses from young people in study 1 were used to guide the sampling of YouTubers for both study 3 and study 4. Saturation was used as a guiding principle in all three qualitative studies.
Inside-outside	The findings from each separate study and the results of the triangulation were peer reviewed by all three members of the supervisory team. External feedback on the triangulated findings was also received through conference presentations.
Weakness minimization	The four-study sequential mixed methods design was purposefully designed so that the weaknesses of one study were addressed by the strengths of another. The use of the triangulation protocol (Farmer et al, 2006) assessed the meaning, prominence and coverage of each theme across the four studies so that the combined data compensated for any weaknesses in individual studies.
Sequential	The findings from each study were analysed and presented separately before triangulation took place. Whilst the studies and data collection tools were designed sequentially, data collection and analysis of the qualitative findings often occurred concurrently.
Conversion	The triangulation protocol was used to collate the research themes according to prominence and coverage as well as meaning (Farmer <i>et al.</i> 2006). Braun and Clarke's (2006)

	process for collapsing themes was used to create the final convergence matrix.
Paradigmatic mixing	A pragmatic approach was taken which acknowledges that the interpretation is constantly moving between subjectivity and objectivity, and specific results and their general implications.
Commensurability	During the triangulation process, the researcher constantly moved back and forth between the qualitative and quantitative findings to create a second layer of analysis which went beyond the purely qualitative or quantitative results.
Multiple validities	The qualitative and quantitative “validities” relevant to each study were first considered using Bryman’s (2012) and Shenton’s (2004) frameworks respectively (summarised in chapter 2) before the legitimization process was applied to the research design as a whole.
Political	The same researcher conducted and analysed all four studies (both quantitative and qualitative) and the three members of the supervisory team reviewed all the qualitative and quantitative findings. Research recommendations relevant to practitioners, policy makers and researchers were made based on the triangulated findings as opposed to the findings from individual studies and aimed to produce practical, workable recommendations that stakeholders and policy makers would naturally value.

Table 8.3: Summary of themes from studies 1 to 4

STUDY 1: School based survey with young people	STUDY 2: Netnographic study of YouTuber content	STUDY 3: Focus Groups with young people	STUDY 4: Interviews with YouTubers
<p>There was a high level of engagement with YouTuber health content among 13-18 year olds:</p> <ul style="list-style-type: none"> • 80% watched at least one YouTuber • YouTuber use and engagement was significantly higher ($p < 0.05$) among males and those reporting poor health while females were significantly ($p < 0.05$) more likely to have sought YouTube health content. • The majority could remember watching YouTuber health content and nearly half (47%) had used YouTube to look for health information • There were significant gender, age and health status related differences in the type of content watched and sought. • Confidence to perform critical assessment tasks on YouTube health content was varied and those who had not watched or sought YouTube health information were at significantly increased odds of a high confidence score • Young people were less likely to recall NHS or charity related health content compared with commercial sources. 	<p>Most common health topics in YouTuber content – sensitive health topics, risk behaviours and abstinence and a commercialised routine of health and wellbeing</p> <p>YouTubers motives for sharing health information: personal connection, benefit their audience as well as financial and self-branding interests.</p> <p>Appeals: shared, personal experience that was perceived relatable and sincere. YouTubers successfully create a sense of community among their audience.</p> <p>Perceived outcomes: raising awareness, encouraging help seeking, increasing confidence and self-efficacy and prompting behaviour change.</p> <p>YouTubers reinforce, reassure and challenge certain norms and there are gendered differences in their methods of communication</p> <p>YouTubers are reluctant to take on an advice-giving role due to worries about misinterpretation and criticism. Signposting to health organisations appears a particularly effective part of YouTuber health content but inconsistencies in YouTubers’ messages could reduce their effectiveness.</p> <p>Some YouTubers report self-regulatory practices towards their young audience but willingness to do so varies. The comments sections of their videos remain largely unregulated.</p>	<p>Young people made use of multiple sources of health information and YouTube played a part in a sense-checking role prior to seeking professional advice</p> <p>Young people distinguished between information they had searched for and encountered in every day viewing and commercial/sponsored content versus unsponsored content</p> <p>Appeals & Concerns: find shared experiences, personable tone and perceived level of sincerity and raising awareness/ challenging stigma. Some referred to YouTubers as like a friend or older sibling suggesting an extension of peer norms. YouTuber health content appears particularly influential for regular viewers, younger age groups and males</p> <p>Young people were concerned about generalisation of health content.</p> <p>Critical appraisal: Older participants believed they were more able than young participants who admitted they could sometimes get things wrong. Younger participants were critical of sponsored content, older participants more accepting</p>	<p>Health content was one of the many aspects of YouTubers roles</p> <p>Their initial motivation for sharing health content was self-expression or lack of online information but they soon observed the benefits this brought to their audience. Appealing to their audience remains a strategic part of their decision to make health content</p> <p>Role model: YouTubers recognised they were often seen as a role model by their viewers but were reluctant in this role. They were concerned about misinterpretation, criticism of their health content when they claimed no expertise and the impacts on their own wellbeing</p> <p>Regulation: YouTubers were universally aware of their young audience and some detailed self-regulation practices with their young audience in mind. However, their overriding sentiment was young people (and their parents) were responsible for filtering in and out of their content and those who had found them would already be predisposed to certain health messages</p> <p>YouTubers producing collaborative health content expect both incentivisation and to retain autonomy over the content they produce.</p>

8.2: Triangulation

Objective 1: To quantify both young people’s engagement with professional YouTubers and the role this plays in sourcing health related information.

Theme	Study 1	Study 2	Study 3	Study 4
The majority of young people were aware of YouTuber produced health content	A	S	A	PA
A substantial proportion of young people used YouTube to look for health information	A	S	PA	S
Young people distinguished between health information they had searched for on YouTube versus health content they had encountered during routine use	A	S	A	PA
There were gendered differences in the types of YouTuber health content watched and health information sought out on YouTube	A	A	A	PA
There were age related differences in the types of YouTuber health content watched and health information sought on YouTube	A	S	A	PA
Young people reporting poor health were more likely to watch YouTubers and their health content	A	PA	PA	PA

A= Agreement, PA= Partial Agreement, S= Silence, D=Dissonance

The findings from the four studies suggest that young people were aware of and to varying degrees engaging with YouTuber produced health content. In study 1, 70% of participants reported they could remember YouTubers talking about at least one of the listed health topics and in every focus group young people were able to give examples of YouTuber produced health content. The findings from study 4 partially agreed that YouTubers were aware that the audience for their health content included young people and that in some cases this influenced their decisions in producing content (this will be explored in greater detail beneath objective four below).

Study 1 found that 47% of participating young people reported using YouTube to seek advice. The focus group findings (study 3) suggest that this was most commonly done as a sense check exercise to allow young people to gauge the seriousness of their health problem before seeking advice from a healthcare professional, family member or peer.

This largely agrees with the existing research, which confirms young people are often making use of multiple sources of health information (Ruppel and Rains, 2012; Grey et al, 2005). Existing research also concurs that online sources like YouTubers may be particularly appealing due to the convenient, anonymous and self-reliant way in which they allow young people to access relatable health information (Gray *et al.* 2005a; Gulliver *et al.* 2010; Fergie *et al.* 2013). However, the research did not explore whether young people engaging with YouTuber health content then go on to pursue help seeking on these health issues from other sources, and this warrants further research.

Young people participating in the focus groups (study 3) distinguished between health information they had searched for and health information that they had encountered in everyday viewing. This was corroborated by the questionnaire study, where a greater proportion of young people could remember seeing YouTuber health content (70%) than had sought health advice on YouTube (47%). This distinction between actively sought versus passively absorbed health information is well documented in the existing literature on young people's online health practices (Papacharissi and Rubin 2000; Gray *et al.* 2005b). For many decades, mass-media health campaigns have made use of passively absorbed health information to communicate health messages (Noar 2006). YouTubers appear promising for young people in this respect as evidence suggests messages are more effective when they are strategically placed on channels widely used by the target audience (Randolph and Viswanath 2004; Noar 2006). YouTubers also have the potential to reach young people from lower-socio economic groups who tend to use the internet more frequently but are less likely to actively search for health information (Livingstone and Helsper 2007; Duggan and Smith 2014; van Deursen and van Dijk 2014; Correa 2015).

This distinction between searching and encountering health information on YouTube also highlights a gap in the existing research on YouTube health content. Previous studies have solely focused on systematic, topic-based searching to review YouTube health content rather than attempting to replicate the patterns of YouTube viewers (Madathil *et al.* 2015). As a recent qualitative study by Goodyear et al (2018b) reported, young people discover social media health content through a range of means including

automatically sourced content, suggested or recommended content, peer content, likes and reputable content. YouTubers participating in study 4 acknowledged that some young people would encounter their content through searching, with their own inability to find relevant health information motivating some YouTubers to produce this content.

However, a greater motivator appeared to be their existing audience who they felt were already predisposed to certain types of content (Markham 2014). This is reflected in the wider literature on YouTuber content creation which suggests that anchor content which is searchable by title and key words attracts new viewers but filler content with more personal aspects of YouTubers lives maintains their regular audience (García-Rapp 2017; Abidin 2018). Study 2 found that health can be presented as anchor content (for example the anxiety (YT1) and depression (YT4) content viewed by the focus groups) or as filler content (for example Q&As) as YouTubers maintain health narratives alongside other aspects of their identity management and presentation (Cocker and Cronin 2017; Khamis *et al.* 2017). From a health improvement perspective, this suggests that YouTuber health messages cannot merely exist in isolation with the hopes that their target audience will come across them. Rather, the most effective messages are likely to be those that focus on topics already relevant to both the YouTuber and their audience. Furthermore, the multiple ways in which health information can be encountered on YouTube (Goodyear *et al.* 2018b) suggest that employing networks of similar YouTubers concurrently might increase the reach of health-related messages.

The way in which young people engaged with YouTuber produced health content varied according to young people's gender, age and self-reported health status. The type of health content young people could seek and recall varied with gender (study 1). Females were 2.4 times more likely than males to seek health advice and females significantly more likely ($p < 0.05$) to recall YouTuber content on body image, wellbeing and mental health. Males were significantly more likely ($p < 0.05$) to recall risk behaviour content. This agrees with wider qualitative research which highlights young male's reluctance to seek health advice (Booth *et al.* 2004; Gray *et al.* 2005a) and gendered differences in health behaviours during adolescence observed in European survey data (Inchley *et al.* 2017). Young people participating in the focus groups highlighted that YouTuber health

content may be particularly appealing to males seeking help on stigmatised topics such as mental health. This appears particularly promising as male survey respondents were significantly more likely ($p < 0.05$) to say that the YouTuber influenced their decision on whether to watch a video and a younger male focus group (study 3) discussed how they had become more aware of mental health issues when a male YouTuber they liked made a video on the topic. The netnographic study (study 2) also highlighted clear gendered differences in the types of content and methods of communication employed by YouTubers that will be explored in detail beneath objective two below.

YouTuber health content was most appealing for those aged under 16 years, with younger participants significantly ($p < 0.05$) more likely to have engaged YouTuber health content (study 1) and young males in particular appeared to be more avid followers of YouTubers (study 3). Those self-reporting poor health were more likely to watch YouTubers and have seen body image, risk behaviour and health condition content. While it is not possible to say how participants defined poor health, the findings from all three qualitative studies suggest that those who were already experiencing a health condition or illness were watching YouTuber health content to find a relatable experience. This reflects the existing literature which suggests online health information is an important way for individuals to find those with similar health conditions, share personal experiences and give and receive support (White and Dorman 2001; Ziebland and Wyke 2012; Smailhodzic *et al.* 2016).

Overall, these findings suggest that young people are consuming a substantial amount of YouTuber related health content through both active and passive engagement and this content may be appealing to certain population groups namely: younger age groups, males and those with existing health problems. This highlights the need for greater understanding of the content produced (objective 2), how it influences young people's health behaviours (objective 3) and how YouTubers perceive their role in producing health content (objective 4).

Objective 2: To examine the ways in which health information is communicated by professional YouTubers

Theme	Study 1	Study 2	Study 3	Study 4
The most commonly mentioned health topics were sensitive topics, risk behaviours and commercialised messages of health and wellbeing	A	A	PA	A
The YouTuber and their content were more influential on young people's decision to watch than YouTube popularity metrics	A	S	PA	PA
Young people distinguished between health content produced by health, charitable or commercial organisations versus unsponsored YouTuber or amateur content	D	PA	A	D
YouTubers played a role in reassuring, reinforcing and challenging young people's health related norms	S	A	A	A
There are gendered differences in the way in which YouTubers communicate health content	PA	A	A	A
YouTubers successfully create a sense of community among their viewers	PA	A	PA	A

A= Agreement, PA= Partial Agreement, S= Silence, D=Dissonance

Three of the studies (1, 2 and 4) indicated that the YouTubers' most common health content was sensitive health topics (particularly sexual health and mental health), risk behaviours and commercialised messages of health and wellbeing. Qualitative studies on young people's use of social media for health information suggest that this content largely reflects young people's wider online habits (Skinner *et al.* 2003; Carrotte *et al.* 2015; Fergie *et al.* 2015; Goodyear *et al.* 2018b). Existing evidence on young people's health seeking behaviours suggest that the anonymity with which young people can learn about sensitive or stigmatised subjects without embarrassment is an appeal of online content (Booth *et al.* 2004; Gray *et al.* 2005a; Fergie *et al.* 2013). However, qualitative studies also suggest that young people's engagement with online health information is always a balance between young people's needs and managing their self-presentation online (Markman 2012; Fergie *et al.* 2015). For example, in his focus group study with young people in Australia, Byron (Byron 2014; Byron 2015) reported that

engaging with conventional sexual health promotion messages on sites such as Facebook was unpopular due to the lack of privacy and stigma associated with sexual health. In contrast, the focus group participants in study 3 seemed generally positive about accessing YouTuber information on sensitive topics, particularly mental health. YouTubers may be appealing because YouTube is a wider and more public online network (Litt and Hargittai 2016) when compared to sites like Facebook where there is greater emphasis on maintaining and strengthening existing social relationships (Robards 2010; Robards and Lincoln 2016). Young people can choose to watch YouTuber health content without logging in (Burgess and Green 2018), it can be presented on the channels young people are already viewing every day (Noar 2006; Wakefield *et al.* 2010) and does not require young people to follow the page of a campaign or health organisation (Byron 2015).

Young people participating in the focus groups distinguished between commercial, health or charity sponsored content compared with unsponsored YouTuber or amateur content. While it is initially promising that young people are able to distinguish between professional and lay sources (Elliott-Binns 1973; Elliott-Binns 1986; Gore and Madhavan 1993) and show awareness of commercial sponsorship in YouTube content, there are also aspects of this distinction which remain concerning. In line with existing research (Gulliver *et al.* 2010), young people recognised that NHS sources were likely to be most accurate. However, their distinction between commercial and public sector health sources was not always clear with NHS, drug companies and charities all given as examples of professional sources during the focus groups. In the questionnaire study, only 48% of participants felt confident identifying NHS or health charity sponsored content whilst 64% were confident in identifying commercially sponsored content. The reasons will be discussed in greater detail in relation to young people's social media literacy under objective 3 below. However, from a content perspective a reasonable explanation might be that NHS content is under-represented in the YouTube environment and, where this does exist; young people are simply not viewing it. This agrees with systematic review studies that suggests that social media adoption by national and local public health departments largely remains in the early adoption phase (Fry and Neff 2009; Thackeray *et al.* 2012; Chou *et al.* 2013). In addition, content analysis

studies of YouTube in areas such as smoking (Elkin *et al.* 2010; Kim *et al.* 2010) and alcohol (Winpenney *et al.* 2014) report good quality health information is often drowned out by commercial sources.

YouTubers can further complicate this issue, as the distinction between sponsored and unsponsored health content and the intentions of these sponsors (i.e. commercial or health improvement) is not always clearly defined (study 2). The findings from study 4 suggest that YouTubers themselves did not always make this distinction when deciding to accept sponsorship for health content. The videos analysed in study 2 showed commercial weight loss companies and products, for-profit sports events and even skincare brands were presented as part of their narrative of health and wellbeing. Furthermore, whilst some YouTubers did demonstrate ethical elements in their decision-making, accepting sponsorship for health-related products was largely guided by the financial incentive and how well it fitted with the YouTubers' brand (study 4). Recent attempts by the Competition and Markets authority to further pressure online celebrities to clearly disclose sponsorship and paid for advertising on their products in accordance with the Advertising Standards Agency rules (2016) may make sponsored content more identifiable to young audiences. However, the boundaries between commercial and non-commercial content remain blurred on YouTube (Burgess and Green 2018).

Health promotion campaigns making use of YouTubers will enter this highly commercialised (Abidin 2018), neoliberal environment (Ayo 2012; Khamis *et al.* 2017) which is dominated by messages of individual responsibility, and coping strategies as the key to good wellbeing (study 2). The difficulties of capturing public attention to initiate and change behaviours in an already crowded media environment is a long-acknowledged challenge to mass-media based health promotion (Randolph and Viswanath 2004; Wakefield *et al.* 2010). The findings suggests this is heightened in the YouTuber attention economy where YouTubers both compete and collaborate with commercial companies (Gamson 2011; Khamis *et al.* 2017; Ashman *et al.* 2018; Burgess and Green 2018). All three qualitative studies suggest that even where health collaborations and health content were of reasonably good quality (for example YT7's

self harm collaboration with a local charity, study 2), these will often sit alongside content from the same YouTuber which endorse unhealthy products or behaviours (for example, high sugar foods, alcohol brands). Evidence from celebrity health promotion suggests inconsistency will limit effectiveness of messages (Valente and Pumpuang 2007).

The findings across all three qualitative studies agreed that by sharing various health related experiences YouTubers could both reinforce and challenge certain social and gendered norms. The findings from the netnographic study (study 2) suggest that female YouTubers focused more on emotional and personal representations of their health experiences whereas males were more likely to generalise, use direct language and employ techniques such as comedy or satire to help share their health experiences. These gendered differences also came to light in the focus groups (study 3) with younger female participants preferring the mental health content communicated by a female YouTuber (YT1) and younger male participants preferring a male YouTuber (YT4). There were some problematic aspects of these norms, for example male YouTubers were more likely to create comedy, satirical or challenge content that pushed the boundaries of risk behaviours (Livingstone 2014) through excessive drinking, unprotected sex and so on. This content could serve to create or reinforce associations between masculinity and excessive risk behaviours among young males (Mitchell *et al.* 2001; de Visser and Smith 2007). In contrast, female YouTubers were more likely to encourage behaviours that reduced risk and challenged peer norms (study 2).

These findings suggest that health promotion efforts which address health related norms could be a useful focus for YouTubers. This was the aim of a recent Public Health England campaign that used YouTuber videos as resources in classroom PHSE education. The premise of this campaign was the YouTubers would act as positive role models who would inspire young people including encouraging young people to resist peer pressure (Newton 2017; Public Health England 2017; McDonald 2018). The young people (study 3) reacted positively to the video from this campaign that they viewed during the focus groups, suggesting peer pressure related content could be particularly effective for

younger viewers. However, these gendered differences (study 2) may also impact on the type of health improvement content YouTubers are willing to make. For example, males may be cautious about producing mental health content and females about risk behaviour content which could “spoil” the gendered expectations of their online personas. This is explored in greater detail under objective 4.

Finally, a distinctive aspect of YouTuber health content was their ability to foster a sense of community among their audience. Study 1 found that the YouTuber and the content were significantly more likely ($p < 0.05$) to influence their decision to initially watch a video than popularity metrics such as likes and numbers of views. This contradicts the findings of previous qualitative studies which suggest popularity metrics play an important role in young people’s engagement with social media health sources (Gold *et al.* 2012; Fergie *et al.* 2013; Hulme 2015) and their self-presentation online (Atkinson and Sumnall 2016; Lincoln and Robards 2016). Community was something which YouTubers consciously cultivated (study 2 and 4) for motives that varied in their degrees of self-promotion and altruism. The comments analysed in study 2 suggest that YouTuber’s audience were engaging and cultivating this community by making use of the comment section to share experiences, and seek and give support and advice. YouTubers’ success in building this online community appears to be due to the sense of trust and familiarity they foster among their audience (Abidin 2018). McCosker (McCosker 2017; McCosker 2018) similarly found that building non-professional expertise through sharing of experiences and coping strategies, framing health through evocative and relatable accounts and facilitating cycles of feedback through structuring engagement, managing relationships and strengthening conventions and norms are all characteristics of successful online health influencers.

The younger (particularly male) focus groups did appear to have this feeling of trust and familiarity towards the YouTubers they watched. However, the findings from the focus groups (study 3) and questionnaire (study 1) highlight that this sense of community will not exist for all viewers. Numerous benefits of participating in online health

communities have been suggested in the literature, including social support, opportunity for disclosure, increased self-esteem and social capital and safe identity experimentation, and young people are known to demonstrate more emotionally emphatic communication online (Best *et al.* 2014). This suggests that health promotion interventions are likely to have more success if they target young people who are already engaged members of YouTuber audiences. They can thus make use of this sense of community by encouraging participation with YouTuber health messages, for example through the video comment section or other social media platforms. The evidence from systematic reviews on mass media campaigns suggests that discussing campaign messages with others has more influence on individuals than viewing the messages (Noar 2006; Wakefield *et al.* 2010). However, this does raise questions about if and how regulation of young people’s wider participation in these types of online health campaigns should be managed which will be considered in detail under objective four.

Objective 3: To explore the way in which these health messages influence young people’s health behaviours (taking into account differences in age, gender and class)

Theme	Study 1	Study 2	Study 3	Study 4
Young people found YouTuber health content appealing because it enabled them to find shared, relatable experiences in a personable tone that was perceived to be sincere	PA	A	A	A
The perceived benefits of YouTuber health information were raising awareness/challenging stigma, encouraging help seeking, increasing confidence and self-efficacy and prompting behaviour change	PA	A	A	A
Young people referred to YouTubers as like a big sister or friend – suggesting they are viewed by some as an extended element of their peer norms	S	A	A	A
Young people felt YouTubers could be useful in raising awareness of health-related issues and reduce stigma	S	A	A	PA

Young people were worried that by generalising YouTubers could lead to misdiagnosis, worsening or triggering health conditions	S	A	A	A
Authenticity and truthfulness appeared an important aspect of how appealing YouTuber health content was to young people	PA	A	A	PA
YouTuber health content appeared most appealing to regular viewers of YouTubers, younger participants and males	A	PA	A	S
Young people generally reported feeling confident to critically appraise the quality of YouTuber health content	A	S	A	PA
Older participants reported being more confident to assess the quality of content than their younger peers while young participants admitted they could sometimes get their judgements wrong	PA	S	A	S
Younger participants were more likely to react strongly to commercialised content while older participants were more likely to accept it	S	PA	A	S

A= Agreement, PA= Partial Agreement, S= Silence, D=Dissonance

The combined qualitative data from young people (study 3), YouTubers (study 2 & 4) and YouTube commenters (study 2) agreed on several positives of YouTuber health content. It allowed young people to find shared, relatable experiences in a personable tone that was perceived to be sincere. The proposed beneficial effects of this information by participants were raising awareness, challenging stigma, increasing young people's confidence and self-efficacy and prompting health behaviour change. The existing evidence from both mass media and social media health interventions do suggest that these campaigns can result in small to moderate increases in knowledge, beliefs and positive behaviours ((Wakefield *et al.* 2010) although to date no studies have explored this in relation to YouTubers. Young people (study 3) and YouTubers (study 2 and 4) were cautious about generalising health experiences and giving health advice due to concerns this could lead to misdiagnosis, triggering or worsening of conditions. Current evidence on the association between social media content and these adverse effects is limited, with a systematic review by Blessell et al (2002) concluding the evidence of any harmful effects due to misinformation online are too weak to suggest

any negative impact. Overall, any causal relationship between positive or negative outcomes and social media health communication remains difficult to establish because most studies make use of multiple communication channels and a combination of other intervention components (Wakefield *et al.* 2010).

Young people in both the focus group (study 3) and netnographic (study 2) studies often referred to YouTubers as like an older sibling or friend. This suggests that some young people saw YouTubers as an extension of their peer norms and thus deemed worthy of emulation (Prinstein and Dodge 2008; Lim 2013). There was also agreement between these two qualitative studies that YouTubers could raise awareness and reduce the stigma associated with certain health conditions and behaviours. Overall, this suggests YouTubers could be influential in addressing wider societal norms. As previously discussed, using YouTubers as positive role models to address prevalent health related norms seems the focus of PHE's Rise Above campaign (Newton 2017; Public Health England 2017; McDonald 2018) but to date no process or outcome evaluation of this project have been published to evidence the effectiveness of this approach. However, all four studies suggested, to some degree, that the concept of YouTuber authenticity would be important in the success of norms focused approaches.

How "authenticity" was defined varied across the studies. It appeared strongly linked to YouTubers perceived credibility, how much their content was shaped by commercial sources and the consistency of their content and behaviour. Authenticity is an important tenet of neoliberal self-branding (Khamis *et al.* 2017) and evidence from wider literature on influencers suggests that over time YouTubers and their audience build a para-social relationship based on familiarity and trust (Cocker and Cronin 2017; Abidin 2018). As discussed at several previous points, this suggests that YouTuber health messages are particularly effective among regular viewers and the findings suggest this will be younger participants (<16 years, study 1) and young males in particular (study 3). However, given the importance of authenticity to these groups (study 3), any health promotion efforts must be aware that young people and YouTubers themselves may not be willing to compromise their authenticity in order to communicate pre-prescribed health messages. A health content format that could potentially overcome this difficulty

is to have YouTubers' produce content 'in conversation' with healthcare professionals. This would mean young people engage with expert opinion and information but still allow YouTubers to maintain autonomy over the style and nature of the content produced. Thus, the trust and familiarity between the YouTuber and their audience can be used to endorse the expertise of health care professionals much in the same way that they endorse commercial products and services (Abidin 2018).

The impact that YouTuber health content has on young people's health behaviours is also dependent on young people's ability to critically appraise the quality and accuracy this content. Overall, just under a third of young people (32.8%) reported feeling confident to perform all five critical appraisal tasks included in the questionnaire (study 1). Across the studies, there were some promising findings in relation to critical appraisal: young people across all age groups were able to identify practical strategies for assessing the quality of YouTuber health content and identify commercially sponsored content (study 3). In addition, both the netnographic findings (study 2) and interviews with YouTubers (study 4) identified occasions when YouTubers' audiences acted in a regulatory role towards the accuracy and appropriateness of health content through both the comments section and direct feedback. Previous qualitative research with young people suggest that they view these corrections and challenges by other users as a positive way in which they are protected against misinformation (Fergie *et al.* 2013; Goodyear *et al.* 2018b). However, these findings only give an indication of young people's perceived confidence in critical appraisal and cannot be interpreted as an accurate measure of their critical appraisal abilities. Young people's odds of a high confidence score in relation to the critical appraisal tasks were higher among those who had not seen YouTuber health content (OR=1.61, $p<0.05$) or sought health advice on YouTube (OR=2.2, $p<0.05$). Young people's confidence in critical appraisal is therefore lower among those who engage with YouTuber health content. This relationship is difficult to interpret; young people engaging with YouTubers may be doing so because they are less able to identify accurate sources of information on YouTube. However, conversely one could argue that those who have viewed YouTuber health content are more aware of the complexities and nuances of YouTuber produced health data thus resulting in a lower confidence score than those who have never viewed this

information. It is also important to note that there was collinearity between this confidence score and age, and so to some extent this score could just be a reflection of young people's increase in skills as they mature (Livingstone 2014), with younger participants both more likely to have a low confidence score and more likely to watch YouTubers.

This was also reflected in the qualitative findings with older participants stating they were generally better able to assess the quality of YouTuber health content than their young peers, who in turn admitted they could sometimes "*get it wrong*". This agrees with existing qualitative research among older adolescents (Atkinson and Sumnall 2016) and could in part reflect young people's desire to distance themselves from their younger online selves and concerns relating to what social media says about them and their values (Livingstone 2014). In contrast, younger viewers (particularly those who were regular viewers of YouTubers) appeared to sometimes confuse accuracy with the YouTuber's credibility (study 3). This agrees with previous qualitative studies with young people that found the reliability of social media health information was strongly tied in with young people's perceptions of credibility, which in turn was defined in terms of the source's expertise, trustworthiness and empathy (Gray *et al.* 2005a; Fergie *et al.* 2013). However, young participants, who in general were more regular viewers, appeared more cynical of sponsored content where they felt the YouTuber was "*selling out*" or "*going mainstream*" (Cocker and Cronin 2017). In contrast, older participants were far more accepting that commercial sponsorship was simply how YouTubers generated income (study 3) and was acceptable as long as the content was also entertaining (study 2) suggesting that for this age group YouTubers are a commercialised and neoliberal "*infrastructure they do not question*" (Van Dijck 2013):175).

These findings suggest that for younger teens, collaboration between public health organisations and YouTubers to produce public health messages which explicitly include indicators of accuracy within the narrative could assist young people in increasing their critical appraisal skills in relation to YouTuber content. However, given that regular, younger viewers are the most cynical about sponsored content any content produced in collaboration with YouTubers must also consider the importance of keeping

consistency with each YouTubers' content and persona and clearly communicating the intended benefits for their audience or else risk alienating young viewers (Cocker and Cronin 2017). In contrast, these messages may not be as effective with older teens who are keen to distance themselves from their younger selves (Livingstone 2014). Instead, the inclusion of a critical media element within PHSE, which equips older teenagers to critique the underlying ideology and ecology of the social media platforms they engage with (Van Dijck 2013), would be particularly useful. This will allow older teenagers, who perceive themselves to be better able to critically appraise YouTuber content, to make more informed decisions about the health information they encounter.

Objective 4: To explore the role that professional YouTubers themselves believe they play in the communication of health messages

Themes	Study 1	Study 2	Study 3	Study 4
Producing health content is just one aspect of YouTubers' content production and is generally a low priority	S	A	A	A
YouTubers' early motivations for producing health content included self-expression and a lack of information available online	S	A	S	A
YouTubers' motives to continue producing health content were personal connection and audience benefits combined with financial and self-branding interests	S	A	A	A
YouTubers acknowledge they are viewed as a role model but are often reluctant in this role due to fears of misinterpretation, criticism, lack of expertise and impact upon their own health and wellbeing	S	A	PA	A
Signposting appears a promising aspect of YouTuber health content, especially when this is done in collaboration with healthcare organisations	D	A	PA	A
Inconsistencies in YouTuber health content such as contradictory advice or signposting to poor quality sources could decrease the effectiveness of their health messages	S	PA	A	A
YouTubers are largely uninvolved in moderating their comments section, suggesting the quality and accuracy of this information will be questionable	S	A	S	PA

YouTubers reported varying degrees of self-regulatory practices with regards to young people	S	A	PA	A
Overall, YouTubers felt it was the responsibility of their young audience (and their parents as appropriate) to filter in and out of their content and this young audience, by choosing to engage in their content, would already be predisposed towards certain content and messages	S	A	PA	A
YouTubers producing collaborative health content expected financial incentives and to maintain autonomy over the content they produced	S	A	PA	A

A= Agreement, PA= Partial Agreement, S= Silence, D=Dissonance

It was clear from the findings of all three qualitative studies that health was just one aspect of YouTubers' content and despite all ten YouTubers (study 2 and study 4) having produced some health-related content, for the majority it was a relatively low priority. This also agrees with the findings from young people that suggest while many were aware of YouTuber health content, it was not their main reason for watching YouTubers (study 3). While YouTubers' early motivations to produce health content were often driven by a need for self-expression or a lack of existing information, their motivations to continue to do so often combined personal connection, altruistic benefits for their audience, self-branding interests and financial gain (study 4).

Across all three qualitative studies, their young audience often placed YouTubers in the position of role model. The way in which role model was defined varied significantly across the studies, from "like a best friend" or older sibling (study 2, study 3), to "a celebrity we can related to more" (study 2) to "being placed on a pedestal" as a good example. These varying definitions are also reflected in the existing literature, where a role model is loosely defined as an inspirational individual or someone who sets an example (Gauntlett 2008) with family members, peers, teachers, athletes and celebrities all captured within its broad parameters (Martin and Bush 2000; Armour and Duncombe 2012). There appeared to be contradictions between YouTubers' and their young audience's understanding of what being a role model entailed. YouTubers were

concerned that this title afforded them a level of expertise they did not have (study 4). For this reason, they shied away from giving health advice due to fear they could misadvise or harm as well as fears of criticism, misinterpretation and undue pressures on their own wellbeing (study 2, study 4). However, young people describing YouTubers in these terms (study 2 & 3) appeared less concerned about YouTubers' expertise and more about the genuine and relatable way in which YouTubers communicated health information, as demonstrated by their frequent comparison to siblings and peers. This is confirmed by existing research on health-related role models that suggests young people deem their health behaviours worthy of imitation because they identify with them or view them as an imagined possible self (Bandura 1995; Brown *et al.* 2003; Armour and Duncombe 2012). Furthermore, research suggests that young people's choosing of role models is complex and reciprocal. Young people position themselves in relation to both positive and negative characteristics, thus an individual does not need to be flawless to be considered a role model (Biskup and Pfister 1999; Lines 2001; Gauntlett 2008). This suggests that while consistent health messages and behaviours from YouTubers may be optimal, this will not necessarily limit the effectiveness of YouTuber health messages for young people who have already engaged with a YouTuber as a role model who suits them (Gauntlett 2008). However, a greater challenge to this issue may be YouTubers themselves who are often reluctant to take on the role of health role model due to the negative impacts on both them personally and their brand.

All included YouTubers were reluctant to give health advice and usually any advice given was personal in nature and intertwined within the narrative of their personal experiences (study 2 & study 4). YouTubers did frequently signpost their users to other sources of advice by either verbally recommending that they seek help from a healthcare professional or more formal provision of links in the video description (study 2). This appears a promising way in which YouTubers can assist their audience in identifying good quality sources of information and encourage help seeking particularly in relation to sensitive topics such as mental health or sexual health. However, the findings also present some challenges for this signposting role. Firstly, while young people in the focus groups (study 3) were aware of some of this signposting (for example collaborations with the mental health charity Mind), less than half of the survey

respondents felt confident to identify videos which were sponsored by the NHS or a health charity (study 1). If young people are not aware of this signposting, then it may not be effective in encouraging engagement with these sources. In addition, YouTubers (study 2 and 4) reported that they do not necessarily critically appraise the accuracy of the sources they signpost; for example, YT10 stated she would base her content solely on the press information provided by a sponsoring organisation rather than further researching the issue themselves. This suggests that in some cases YouTubers may be signposting to incorrect or contradictory health advice that could decrease the effectiveness of their messages among their audience (Valente and Pumpuang 2007).

The extent to which YouTubers imposed any regulatory practices upon themselves or their audience was variable and generally limited (study 2, study 4). While YouTubers often encouraged their audience to share experiences, advice and provide support to one another through the comment sections of their videos, YouTubers themselves were largely absent from this discussion (study 2). With the exception of a few ground rules relating to appropriate behaviour and language, the comment section was largely unregulated. While some commenters did take responsibility for reviewing this content (study 2), comparison with existing studies of online health communities suggest this was not done with the consistency or commitment of those in formal moderator roles (Carron-Arthur *et al.* 2015; McCosker 2017). In some cases, the health advice given in the comment section was poor quality, for example there seemed to be many examples of young people self-diagnosing conditions such as depression and anxiety (study 2). This suggests that health promotion campaigns with YouTubers must not solely focus on the video content but also in supporting YouTubers in monitoring the resulting comments and feedback from young people. For example, this could be done by assisting with comment responses for a designated follow up period or using livestream Q&A sessions in collaboration with the YouTuber.

The moderation of YouTube comments has received considerable attention in the international press over the past year. In February 2019, a public campaign led by a well-known YouTuber raised concerns about child exploitation activity within YouTube

comments²¹. Following pressure from advertisers, YouTube began to disable the comment section of many large influencers for moderation and demonetise²² videos based on the content of their comments before ultimately announcing a comment ban on all content featuring children²³. This came alongside widespread press coverage pressuring social media platforms to moderate their content to protect young people from suicide and self-harm related content²⁴. Pressuring large technology companies to take further responsibility for protecting young social media users from harm is undoubtedly positive. However, it is concerning that there is a lack of input from expert and health professional voices in making these decisions that often appear more reliant on algorithmic decision-making and focused on maintaining platform profits (Burgess and Green 2018). This suggests an area for wider policy intervention to ensure more robust strategies to protect young audiences from harm. It also highlights that YouTubers themselves can be successful in lobbying for policy change. Study 2 found several examples of YouTubers acting as champions for example for the United Nations Global Goals gender equality campaign. Evidence from a systematic review found that media interventions can have a positive impact on health policy change through awareness and accountability tools leading to policy discussion initiation, formulation, compliance and even adoption. However, the existing evidence is not sufficient to conclude which circumstances make these interventions successful and in particular there is a lack of evidence on social media based interventions (Bou-Karroum *et al.* 2017).

All YouTubers (study 2 and 4) appeared aware of their young audience and some reported self-regulatory practices with these young viewers in mind, for example refusing collaborations with gambling companies or weight loss products. However, YouTubers' willingness to do so was varied with young male YouTubers expressing frustration and criticism of the platform regulations imposed on them by YouTube. Overall, YouTubers felt that once their content was out there, it was the responsibility

²¹ MattWhatitis (2019) YouTube is facilitating the sexual exploitation of children, and it is being monetized
<https://www.youtube.com/watch?v=O13G5A5w5P0>

²² Demonetize is YouTube's term for removing a content creators ability to earn money by removing advertisements.

²³ The Times (1st March, 2019) YouTube blocks comments on videos of children after advertising backlash
<https://www.thetimes.co.uk/article/youtube-blocks-comments-on-videos-of-children-after-advertising-backlash-hbh570cmv>

²⁴ The Guardian (8th February 2019) Instagram heads off regulations with ban on self harm images
<https://www.theguardian.com/technology/2019/feb/08/instagram-heads-off-regulations-with-ban-on-self-harm-images>

of their young audience (with parental support as appropriate) to filter in and out of their content as they saw fit (study 4). They were largely of the view that regular viewers of their channel would have found them because they were already predisposed towards certain content and messages (Markham 2014). This highlights that while it may be tempting for collaborating health organisations to simply choose the YouTubers with the largest number of subscribers, these campaigns will be more effective if they target YouTubers based on the health content they have previously produced, as their audience is likely to be more predisposed towards receiving these messages positively. Similarly, targeting YouTubers who demonstrate more measured consideration of the ethical implications of their health content may be more willing to participate and increase the consistency and accuracy of the health content produced.

Finally, YouTubers (study 4) outlined their requirements for producing collaborative health content which universally required both financial incentives and an expectation that they would retain autonomy over the content they produced. Decisions to use YouTubers as an element of health promotion campaigns must therefore carefully weigh the financial cost against the potential benefits. Evidence from celebrity endorsed mass-media campaigns have shown that these attempts can result in increased knowledge as well as short term behaviour change (Hoffman and Tan 2013; Hoffman and Tan 2015). However, the public and costly nature of these campaigns mean they are more susceptible to public scrutiny and criticism. This was highlighted by a recent government investigation in Australia following a government physical activity campaign which invested \$600,000 into Instagram influencer promotion which made no attempt to establish effectiveness and employed influencers who had also endorsed alcohol brands²⁵. It is therefore acknowledged, that in light of the current limited evidence, large mass-media style campaigns using YouTubers, though appealing due to their audience scale and immediacy, are not known to be an effective measure in terms of cost or outcomes. However, this research has highlighted several promising aspects of YouTuber health content. Piloting of YouTuber health messages on a small scale which employ target audience feedback and process evaluation to identify suitable outcome

²⁵ ABC News (20th July, 2018) Health Department Investigating Instagram Influencer Campaign
<https://www.abc.net.au/news/2018-07-20/health-department-investigating-instagram-influencer-campaign/10016712>

measures would be a valuable way to begin strengthening the evidence base. The evidence suggests, most appropriate use of YouTubers is likely to be as one smaller element of larger health improvement interventions targeted at young people. The way in which these promising aspects of YouTuber health content would fit into existing intervention efforts is considered in greater detail in objective 5 below.

Objective 5: To consider the potential contribution YouTubers can make to the development of health improvement interventions for young people.

Overall, the triangulated findings appear to offer insights to two areas where YouTubers can contribute to the development of health improvement interventions for young people. Firstly, a substantial amount of YouTuber content already exists and appears to be appealing to certain audiences of young people. This existing content has the potential to be used for educational and health improvement purposes. Secondly, there also appears to be the potential for public health professionals to work in collaboration with professional YouTubers to develop content which communicates health related messages as part of young people's health improvement interventions. It is first important to note that this research was exploratory in nature and so the intention of this section is not to suggest that the findings have all the answers in relation to YouTubers and health interventions. However, as Michie et al (2011) argue, developing a thorough understanding of the circumstances in which health improvement efforts are most likely to be effective is an important initial step which can assist those who are involved in future intervention design. Atkins et al (2017) suggest a simple but effective way in which to do this is to specify the target behaviour in terms of *who* needs to do *what*, *where* or *when* do they need to do it and *how*. Being specific about health behaviours in this way allows us to be more focused in understanding these behaviours (Atkins *et al.* 2017). These five questions have been used to synthesise the findings of the triangulation with the aim of identifying the potential contribution YouTubers can make to the development of health improvement interventions for young people. This is summarised in figure 8.1 below followed by a narrative of each element.

Figure 8.1: Potential Contribution YouTubers can make to health interventions according to Atkins et al's (2017) criteria

Who?	<ul style="list-style-type: none"> • Young people • Public Health Professionals and Educators • YouTubers
What?	<ul style="list-style-type: none"> • Educate young people in critically appraising YouTuber health content • Develop a framework to review the quality and accuracy of YouTuber health content • Collaborative health messages communicated through YouTuber videos and wider social media (small scale piloting)
Where?	<ul style="list-style-type: none"> • School based education • YouTubers' channels and wider social media platforms
When?	<ul style="list-style-type: none"> • Sustained involvement rather than one-off messages
How?	<ul style="list-style-type: none"> • Messages maintain authenticity and consistency with YouTubers' existing content • Signposting to reliable sources of health information • Positive role models for health related norms • Use YouTubers' community to encourage participation in health messages

Who? YouTuber health messages appeared to be more appealing to certain groups of young people. Females were more likely to have already used YouTube to seek advice, suggesting video formats which share YouTubers health experiences may be appealing. For males, there was a sense that through YouTubers they could access health information that was stigmatised (such as mental health) suggesting an awareness raising role might be more beneficial for this group. Older participants are keen to distance themselves from content perceived to be targeted at younger teens, so messages which are targeted across the 13-18 years age range may not be effective for older teens. Those with self-reported poor health were more likely to have watched

YouTuber content on risk behaviours, body image and health conditions suggesting this might be a promising way in which to reach this population. Overall, YouTuber health interventions are likely to be more effective among those who are already regularly watching and viewing YouTubers. Suggesting that targeting these young people and placing health promotion campaign messages on YouTubers' existing channels could increase their effectiveness. Viewers are already likely to be predisposed towards certain messages and types of communication, so targeting YouTubers who have already produced content relevant to the campaign message could also increase effectiveness. This requires those developing campaign messages to have a prior understanding of the characteristics of YouTubers and their audiences before initiating these collaborations to ensure their messages reach the intended populations.

Key messages

Using YouTubers as part of health campaigns could be particularly effective in communicating messages to those young people who are already regular viewers of YouTubers

The differences in older and younger participants suggest that targeting messages across the 13-18 age category may not be as effective with older teenagers who wish to distance themselves from their younger online selves.

While it may be tempting to focus on recruiting YouTubers with the largest number of young subscribers to health promotion efforts, it may be more effective to focus on YouTubers already producing this kind of content, as their audience will be more predisposed towards receiving these messages positively

What? The existing evidence on the quality and accuracy of YouTuber health content is extremely sparse. Previous studies have attempted to assess the quality of YouTube health content, but the methods are varied, and no studies have focused on YouTubers. While systematically assessing the accuracy of YouTuber health content was not an objective of this research, the findings suggest the quality of YouTuber health content is

extremely variable and dependent on several YouTuber and wider platform-focused and commercial factors. Using those with health expertise to systematically review existing YouTuber content quality based on clinical knowledge and existing guidance could identify existing videos which could be used in young people's education for example in classroom based PHSE lessons. The findings from this review could be used to develop a set of quality assessment criteria which would then allow young people's health practitioners and educators to assess and identify relevant sources for use of in their practice.

Collaborations between YouTubers and public health professionals to produce videos which communicate specific health messages also appear promising. This approach was taken by Public Health England in their Rise Above for schools PHSE campaign (Public Health England 2017) but there is little published evidence to indicate the process collaboration or measure the outcomes of the campaign. YouTuber videos could be supplemented by posts on other social media platforms such as Instagram, snapchat, Facebook and Twitter as well as the use of live stream technologies to increase audience engagement. Content such as YouTubers in conversation with a healthcare professional could be promising as they would lend the YouTuber expertise they felt they lacked, allow the YouTuber to maintain autonomy over their content and maintain the familiarity and authenticity which YouTubers' audiences seek. This relationship of trust and familiarity between the YouTuber and audience, will allow them to endorse healthcare professionals and organisations. However, the financial incentives required to collaborate with YouTubers may make these health campaigns prohibitive and so will require careful piloting once suitable outcome measures of success and effect have been identified.

YouTubers could also be used to increase social media and health literacy among young people. Collaboration with YouTubers to create health-related videos could include indicators of health information accuracy and quality into their narrative for example by encouraging YouTubers to cite their sources and provide background information about their collaborators. This could be a positive way to educate younger participants on critical appraisal skills by encouraging them to apply these practices in their own

YouTube viewing. For older teenagers (>16 years), the findings suggest that critiquing existing YouTuber health content in a PHSE classroom setting would be useful to help them understand the neoliberal and commercial infrastructure which underpin social media platforms. This would not simply assist young people in identifying sponsored content but also encourage them to reflect “the structures they do not question” (Van Dijck 2013): p157) thus having wider implications for their health literacy both on and offline.

Key messages

Expert reviews of existing YouTuber content to identify high quality videos, which can be integrated into school-based health promotion and develop a set of criteria which allows those involved in young people’s health promotion to assess this content.

YouTuber collaborations to produce health messages appear promising including content which features YouTubers in conversation with health care professionals and which explicitly identifies indicators of accuracy during their narrative. The cost implications of these partnerships mean public health agencies must be cautious about investing in these campaigns without first establishing evidence of their effectiveness through smaller scale piloting.

For older viewers, education through the inclusion of a critical media element within PHSE, which equips young people to critique the underlying ideology and ecology of the social media platforms they would be particularly useful.

Where? Placing health messages on YouTubers own channels and social media can benefit from the relationship of trust between audience and YouTuber, ensure a wide reach and increase chances of discovery by target populations during their everyday viewing. However, it must be acknowledged that not all YouTubers will necessarily be amenable to these collaborations due to concerns such managing self-presentation, maintaining their audience and maximising profit.

Using YouTuber content in school-based PHSE education may also be appropriate. However, the findings demonstrate that not all young people will be interested in YouTubers, highlighting that these campaigns should only be delivered as a well-developed component of PHSE campaigns which allow all young people to participate regardless of their familiarity with the YouTuber.

Key messages

YouTuber channels and school PHSE programmes appear to be the most promising venues for communicating with young people.

When? The nature of the YouTuber-audience relationship suggests one-off, isolated health messages might be less memorable than sustained communication across multiple communication channels. Audience and YouTubers have built up a sense of trust and familiarity sometimes over a period of years. One-off health messages, even when part of a wider integrated campaign, may pose a risk of alienating YouTubers' young audience if they appear out of character or endorse messages and behaviours which contradict the YouTuber's prevailing narrative. Using YouTuber messages as part of wider interventions which link viewers to wider components such as service provision, product distribution, wider online intervention activities may also lead to longer term impacts.

Key messages

The long-term feelings of trust and familiarity between YouTubers and their audience suggest sustained health messages across multiple channels may be more effective than one-off messages.

How? Health content should be consistent with each YouTuber's persona and existing content and clearly demonstrate the benefits to their audience in order to maintain young people's perceptions of authenticity (Cocker and Cronin 2017). Positive aspects of YouTuber health content which should be maintained include using personable and relatable experiences, present coping strategies which increase young people's

confidence and self-efficacy, raise awareness of key issues, services, treatment and prevention, present positive norms of health behaviours and challenge peer and other wider pressures. In particular, using YouTubers as role models to communicate positive health behaviours and norms to young people appear promising. The findings show existing YouTuber produced content focuses largely on individual responsibility and so health messages which incorporate structural barriers to wellbeing and the wider determinants of health could address these neoliberal notions and widen young people's understandings of the societal impacts of ill-health. YouTubers could be further encouraged to employ signposting to accurate sources of health information and care.

Health messages should also make use of the sense of community YouTubers have fostered, encouraging young people's participation with their content by using the video comments and other social media to allow them to discuss the intervention messages. This kind of interaction would require support for YouTubers from public health professionals after the message is posted for example by monitoring and responding to comments or collaborative live stream sessions. This support could also be extended to YouTubers during any resulting engagement with the press to help addressing any issues related to misinterpretation or criticism.

Key messages

Health collaborations must be consistent with YouTubers' previous health messages as well as their wider tone and persona to be well received by their young audience

YouTubers may be a promising way to communicate positive norms of health behaviour to young people.

Using YouTubers to signpost to official sources of advice, products and services within wider young people's health improvement interventions or campaigns may be promising

YouTubers' sense of community with their audience suggests approaches which encourage audience interaction are promising but require support from public health professionals to maintain their effectiveness.

Limitations

There are several limitations of this study which must be acknowledged. The specific methodological implications of the four individual studies have been considered in each respective chapter and so this section will consider the limitations of the research programme as a whole.

Both the school-based elements of this research programme (study 1 and 3) recruited from a single county in the North West of England and the participating schools were a self-selecting convenience sample. Furthermore, the UK YouTubers selected for study two were selected using a sampling frame developed from the responses to study 1. Whilst the number of subscribers each YouTuber had (>1 million) is some guarantee of their popularity and reach, the sampling frame cannot be said to be representative of the views of all 13-18 year olds in the UK. Similarly, the YouTubers recruited to participate in interviews for study 4 were also recruited on the basis of this sampling frame and the resulting sample size was small (n =3). However, the research programme was largely qualitative and exploratory in nature and so did not aim to produce findings which were generalisable. Furthermore, maximum variation (Emmel 2013) was achieved in the focus group study, ensuring a range of young people's perspectives on YouTuber produced health content was captured. The large sample size achieved across the research programme is a particular strength of the research project; however, with the exception of study 2, these findings were from a single county thus limiting their potential to be referred to in a national context.

Due to the geographical location of participating schools, young people were largely of white ethnicity and socio-economic status (measured using IDACI) and mental wellbeing (measured using WEMWEBS) were lower than the national average. Including a higher

proportion of young people from non-white and higher socio-economic backgrounds may have provided additional insights particularly as previous research indicates young people's online health behaviours vary by demographic and socio-economic characteristics (Davies et al, 2017). The YouTubers included in the study were largely of white ethnicity and from middle-class socio-economic backgrounds although the limited data available suggests these characteristics are generally representative of the most subscribed YouTubers in the UK (Social Blade 2017).

From a data collection perspective, the research relied on self-reported and recalled measures of young people's engagement with YouTuber health content (Krosnick 1991; Olsen 2008). In particular, young people's ability to critically appraise the quality of YouTube health content relied on young people to self-report how confident they felt to perform the listed critical appraisal tasks (questionnaire, study 1). Similarly, young people discussed strategies to identify the quality and accuracy of YouTuber health content in the focus groups (study 3) but neither study explicitly measured young people's performance of these behaviours. The interviews (study 4) did not impose any time limit when asking YouTubers to discuss their experiences of producing health content which in some cases had been done over a ten-year period and so may also be affected by recall bias. In the netnographic study (study 2) it was difficult to confirm both the authenticity and demographics of those posting comments. It was therefore often not possible to identify if commenters were within the target population (13-18 years) for the study and while the comments provided brief insights into individual's experiences there was no opportunity to follow up their meaning. However, a strength of this research which goes some way to overcoming these limitations is the mixed methods design. The sequential design allowed the findings from each study to be further explored and expanded upon in the subsequent studies. In addition, triangulation of the findings from the four studies allowed for a richer and more complete understanding of the role professional YouTubers play in young people's health behaviours (Hewson 2006).

8.3: Summary

This chapter triangulated the findings from the four studies included in this research according to the research objectives. The findings were then used to identify promising aspects of YouTuber health content in relation to future health improvement interventions for young people. In the next chapter, the concluding remarks summarise these findings in relation to the research aim which was to examine the role professional YouTubers play in young people's health behaviours. The conceptual framework (initially presented in chapter 2) is revisited in light of the research findings, to provide and enhanced understanding of how these findings fit into the wider theories of health behaviour. Finally, recommendations for practice and further research are presented.

Chapter 9: Conclusion

This chapter presents the overall conclusions of the programme of research. The conceptual framework is revisited in relation to the research findings to situate the research within the existing body of knowledge. The research is contextualised within the wider public health discipline and recommendations for practice, policy and future research are presented. Finally, I reflect upon my experiences as a researcher during the programme of research before presenting some concluding remarks.

9.1: Conclusions

This research found that YouTubers were among one of the many sources of health information used by young people. The findings suggest that young people are consuming a substantial amount of YouTuber produced health content through both active and passive engagement and this content may be appealing to certain population groups namely: younger age groups, males and those with existing health problems. YouTuber health content covered a range of topics with the most common being sensitive health topics (such as sexual and mental health) and risk behaviours which often appeared to reinforce certain gendered perceptions of these behaviours. YouTubers and young people agreed on several positive aspects of YouTuber health content: it allowed them to find shared, relatable experiences in a personable tone that was perceived to be sincere. This had the potential to signpost to health professionals and accurate sources, raise awareness, challenge stigma, increase young people's confidence and self-efficacy and even prompt short-term behaviour change. The success of YouTuber health content was influenced by their ability to foster a sense of community among their audience, by consciously cultivating familiarity and trust among their young viewers, which allowed them to endorse certain health related products or behaviours. However, young people and YouTubers were also concerned that YouTubers giving advice beyond their expertise or generalising could lead to misdiagnosis, triggering or worsening of health conditions.

YouTubers were reluctant to give health advice due to fears of misadvising, criticism, misinterpretation and undue pressures on their own health and wellbeing. For this reason they shied away from the term role model which was often applied by their young audience, to whom YouTubers appeared to be an extension of their peer norms and were felt worthy of emulation. This suggests that YouTubers could have a promising role to play in campaigns focused on communicating positive norms to young people. However, YouTubers' success as a role model was dependent on their perceived authenticity that was particularly important for younger, regular viewers and young males in particular. How authenticity was defined by YouTubers' young audience varied but was positively impacted by the consistency of their content and behaviour and negatively impacted by the perceived influence from commercial sources.

The clearest tension identified by this research was the fine line YouTubers were treading between health promotion and self-promotion. YouTubers' initial motivations to produce health content was largely a need for self-expression, but their motivations to continue producing this content combined personal connection, altruistic benefits for their audience, self-branding interests and commercial gain. For this reason, the distinction between commercially sponsored, NHS or charity sponsored and unsponsored content, and the intentions of these sponsors (health promotion or commercial) is not always clear. While this research did identify some promising examples of health collaborations with YouTubers, this content was often placed alongside content from the same YouTuber endorsing unhealthy products and behaviours that could limit the effectiveness of these messages. The impact of YouTuber health content is also dependent on young people's critical literacy skills. Although there were some promising findings relating to young people's perceived confidence in identifying practical strategies for assessing the quality of YouTuber health content and commercial sponsorship, this study did not measure young people's performance of these behaviours. The research found that young people's self-assessed ability to critically appraise YouTuber health content increased with age, with younger participants' judgements more likely to be influenced by the perceived credibility of the YouTuber; although these younger participants appeared more cynical about commercial content than their older counterparts. YouTubers' regulation of their health

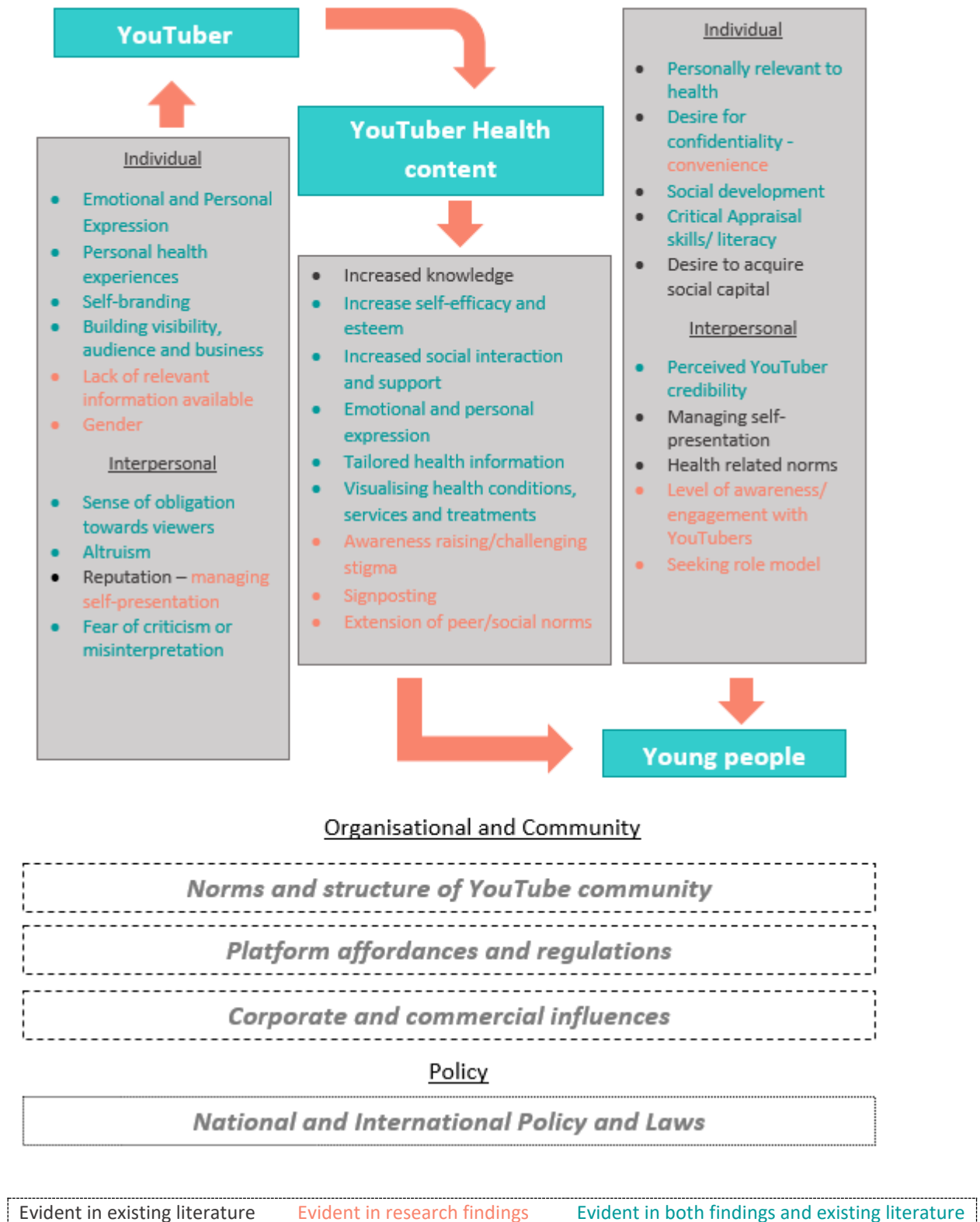
content was extremely variable. While some did limit the types of health sponsorship they accepted due to their young audience, they largely viewed it as their audience's own responsibility to filter in and out of their content as they saw fit. Regardless of their ethical concerns, YouTubers universally expected financial incentives and to retain a degree of autonomy in health content collaborations.

The integrated findings from the research are presented in relation to the conceptual framework in the section below. The potential contribution YouTubers can make to health improvement was previously outlined in chapter 8. These synthesised findings have been used to develop a series of recommendations from the research, which are included below.

9.2: Conceptual Framework

As previously described in chapter 2, a conceptual framework was developed for the research based on the existing research from both public health and wider media and communication based literature. Based on the socio-ecological model (McLeroy *et al.* 1988), the framework considered the individual, interpersonal, organisational, community and policy factors which impact upon YouTubers' health content production and how young people engage with this content. The framework also collated the evidence on the potential impacts this content could have on young people's health behaviours. Bloomberg and Volpe (2016) contend that the conceptual framework should be an iterative process that evolves as the research evolves. This section therefore revisits and reflects upon the conceptual framework in light of the research findings. The themes from the integrated findings of the four studies (chapter 8) were grouped into individual, interpersonal, organisational, community and political factors for YouTubers and young people. The list of themes was then compared to the original conceptual framework, and areas where the framework agreed and differed were identified. The conceptual framework is presented in figure 9.1 below; concepts that were confirmed by the research findings are presented in blue, while additional concepts that have been added to the conceptual framework as a result of the research are indicated in pink.

Figure 9.1: Conceptual Framework



YouTubers: The research findings confirmed that the opportunity for emotional or personal expression and their own personal health experiences were individual factors that impacted upon YouTubers' decision to make health content. The research findings also suggested that their inability to find existing online information relevant to their health experiences and the YouTubers' gender could also affect the health content they produced. The research findings agreed that obligation towards their audience and feelings of altruism motivated YouTubers. YouTubers were also motivated by reputation but the research findings suggest that this is more nuanced than simply a desire for status and respect from others, but is also linked to managing their self-presentation, and a fear of misinterpretation and criticism from not only their online audience but also additional sources such as the traditional press. These interpersonal factors also link with the wider organisational culture of YouTube which is built on a requirement to self-brand and thus build and maintain both audience and revenue.

Young people: young people's engagement with YouTuber health content was motivated by finding health information that was relevant to their own individual health. The way and extent with which young people engaged was influenced not only by their social development but also their gender and their self-reported health status. The concept of anonymity and confidentiality is frequently cited in the wider literature. While young people in this research did make occasional reference to the confidential nature of YouTuber content, this tended to be framed more broadly in terms of the convenience with which they could access this information. The extent to which young people engaged with YouTubers in general also influenced the extent to which they engaged with their health content; with highly engaged young people more likely to perceive YouTubers as credible and trustworthy. The literature suggests that young people's engagement is balanced with young people's self-presentation online, however this concept did not appear particularly important in the findings from this research. This could be due to the more public nature of YouTube in comparison to social networks, such as Facebook, which emphasise building pre-existing friendships and networks. In addition, the findings did not explicitly reveal that young people's wider health-related norms influenced their engagement with YouTubers but the research did suggest that many young people's search for a role model was influenced by the type of health

messages young people were predisposed towards receiving. Young people's critical appraisal skills were an important influence on their engagement with YouTuber health content and these in turn were not only affected by formal teaching of these skills but also a combination of the individual and interpersonal factors discussed above, particularly young people's social development, their level of engagement and feelings of trust towards YouTubers.

Organisational, community and policy factors: The findings confirmed that YouTuber health content was influenced by a range of community factors including the community and norms which have been developed by YouTubers and their audience, and the affordances and platform regulations of YouTube. The findings suggest that YouTubers' willingness and practical actions to regulate their content was varied and was influenced by the individual and interpersonal factors discussed above. The impact of corporate and commercial influences on YouTuber health content was highly evident in this research with sponsorship and advertising interwoven into a neoliberal narrative of personal responsibility and individualised coping strategies. Even where promising public health organisation collaboration did exist this was competing for space with commercialised, and at times contradictory, messages from the same YouTuber. It was also clear that wider policy and laws do impact upon YouTuber health content. The most frequently mentioned in this research was the Advertising Standards Agency (2016) rules on disclosing paid for advertising on online influencer content. Over the course of the research, there has been growing government interest in the impact of social media on young people's health and wellbeing which suggests that policy factors may increase in influence over the next few years.

YouTuber health content: as an exploratory study this research did not explicitly measure the outcomes of engaging with YouTuber health content, so it is not possible to say if this content increased young people's health knowledge. However, the qualitative findings demonstrated that young people perceived a number of outcomes including increased self-efficacy and opportunity for personal expression, increased opportunities for social interaction and support from those with similar health experiences and access to more tailored health information that allowed them to

visualise health conditions, treatments and services. In addition, the findings suggested potential roles for YouTuber health content that was not commonly discussed in the existing literature including signposting young people to accurate sources of health information, raising awareness, and challenging stigma. As discussed in relation to young people and interpersonal factors, YouTubers' role model status meant they appeared to be an extension of peer norms for some young people and their content frequently acknowledged, reinforced and challenged social and gendered norms.

9.2: Recommendations

The findings from the research have been used to develop a number of recommendations for practice, policy and for future research. The implementation of these recommendations should be combined with formative and process research with young people and YouTubers to ensure positive outcomes (Noar 2006). In addition, due to the high costs associated with online influencer collaboration, small-scale piloting to establish evidence of both positive outcomes and cost-effectiveness should precede these interventions.

It is also important to acknowledge, that the recommendations sit as just one aspect of the wide range of interventions and policies which must work together to improve young people's health. Michie et al (2011) reviewed 19 behaviour change intervention frameworks to produce their behaviour change wheel. They present nine types of interventions that address deficits in behaviour and seven categories of policy that could enable those interventions to occur. The recommendations developed from the findings of this research aligned with four of the practice based and one of the policy based intervention types. The recommendations for practice are focus on: 1) education: "increasing knowledge or understanding" 2) persuasion: "using communication to induce positive or negative feelings or stimulate action" 3) training: "imparting skills" and 4) modelling: "providing an example for people to aspire to or imitate". The policy recommendations fit into the guidelines category: "creating documents that recommend or mandate practice" (Michie *et al.* 2011):p7). This research suggests that

YouTubers have a promising role to play in health improvement. However, it is acknowledged that these intervention efforts will enter a crowded environment and thus compete with multiple factors including commercial marketing, social norms, entrenched behaviours and the wider structural and environmental factors which impact upon young people's health (Randolph and Viswanath 2004; Wakefield *et al.* 2010).

Recommendations for practice

Education and Training

- Public health professionals wishing to use existing UK YouTuber content in topic specific health interventions with young people should consider using those with relevant health expertise to systematically review the quality of existing YouTuber health content quality based on clinical knowledge and existing clinical guidance. The findings from this research suggest that videos that discuss experiences and norms associated with sensitive topics, such as mental health, are particularly promising. Videos that are good quality should be used in young people's education for example in classroom-based PHSE. These videos should be integrated into well-developed PHSE programmes to ensure that all young people can engage with this content regardless of their familiarity with YouTubers.
- Collaboration with YouTubers to create health-related videos should include indicators of the health information accuracy and quality into their narrative. Examples include encouraging YouTubers to cite their sources, divulging collaboration and providing background information about their collaborators. This will help educate young people on critical appraisal of YouTuber health content and encourage them to apply these practices to their own viewing.

- Encourage YouTubers to signpost to accurate sources of health information and services in their health content. This should assist young people in identifying and engaging with good quality sources of health information.

Persuasion and Modelling

- Public health organisations should collaborate with YouTubers to produce health content aimed at young people. This content can include personable and relatable health experiences, coping strategies that increase young people's confidence and self-efficacy, awareness raising of sensitive or stigmatised health topics, services, treatment and prevention.
- YouTubers in conversation with a health professional is a promising format that should be used. This would lend the YouTuber the expertise they feel they lack, allow the YouTuber to retain autonomy over the content produced and maintain the familiarity that YouTubers' audiences seek.
- YouTubers should be used in campaigns as role models to communicate positive health behaviours and norms.
- YouTuber interventions are more likely to be effective among those who are already regularly watching YouTubers and so placing campaign messages on YouTuber's existing channels should increase their effectiveness.
- Sustained communication of campaign messages across multiple channels (rather than one-off communications) will increase campaign impact. Posts on other social media platforms (e.g. Snapchat, Instagram, Facebook and Twitter) and use of live stream technologies to increase engagement should supplement YouTuber videos.
- The sense of community YouTubers have fostered should be used to encourage young people to discuss the targeted health messages. This kind of interaction would require sustained support for YouTubers from public health professionals

after the message is posted e.g. monitoring comments or collaborative live stream sessions

- Campaign messages should be developed with a prior understanding of the characteristics of YouTubers and their audiences to ensure the messages will reach the intended populations. Young people watching YouTubers are likely to be predisposed to receiving health messages on the topics YouTubers already cover. In addition, personal experiences can be more appealing to females while awareness raising is more appealing to males.
- Campaign messages should be consistent with each YouTuber's persona and existing content, and clearly demonstrate benefits to their audience in order to maintain young people's perceptions of authenticity. YouTuber interventions as part of wider interventions that link viewers to wider components such as service provision, product distribution and wider online intervention activities may also lead to longer term impacts.

Recommendations for policy

Guidelines

- Public health professionals in young people's health promotion should develop a quality assessment framework that can be used by young people's health practitioners and educators to identify relevant and accurate YouTuber health content that they can then make use of in their practice.
- Include critical appraisal of online content alongside current PHSE secondary education on online safety, to equip young people of all ages to critically assess the quality of online health content, identify commercial sources and reflect upon the underlying structures of social media.

Recommendations for future research

- The existing evidence on the quality and accuracy of YouTuber health content is extremely sparse. While previous studies have attempted to assess the quality of health content these studies did not select the content most popular with young people, vary in the methods used and outcomes measured, and no studies have focused on YouTubers. More research is needed to systematically establish the quality of YouTuber health content.
- Process and outcome evaluation of existing campaigns which have made use of YouTubers (for example PHE Rise Above campaign) should be conducted by Public Health England or a commissioned independent research team. The published findings would be valuable to public health organisations and practitioners involved in young people's health and increase the evidence base on the effectiveness of YouTuber based interventions
- There is very little research that has measured young people's literacy or critical appraisal skills in relation to social media health content, and most existing studies are qualitative and exploratory or rely on self-reported measures. Research is needed to firstly develop a standardised scale to measure social media health literacy. Secondly, longitudinal and randomised study designs are needed to understand young people's performance of these practices rather than relying on self-reported measures.

These recommendations have been used to create a checklist for public health professionals who are considering collaborating with YouTubers to produce online video health messages targeting young people. This list does not attempt to replace theory or planning models in the design of YouTuber based health improvement messages. Rather, the intention is to illustrate how the findings from this research could be used by young people's public health practitioners to inform the design of collaborative health messages with YouTubers. Furthermore, as the recommendations above

highlight, practitioners must also consider how these messages could be delivered as part of wider health promotion campaigns and interventions, for example as part of school PHSE or alongside mass media interventions.

Table 9.1: Checklist of public health practitioners creating health messages with YouTubers

1) Target Audience	<ul style="list-style-type: none"> <input type="checkbox"/> Identify the target audience for the health message. Consider segmenting by gender, age, health status, regular vs non-regular YouTube viewers. <input type="checkbox"/> Identify which YouTubers will be targeted to promote health messages – balance considerations between number of subscribers and those already producing content on this health topic.
2) Level of control	<ul style="list-style-type: none"> <input type="checkbox"/> Develop an approach to collaboration which is mindful of YouTubers’ own priorities of self-presentation, financial gain and maintaining audience to increase chances of success. <input type="checkbox"/> Confirm the level of financial incentive which YouTubers will require to participate in collaborative campaigns. <input type="checkbox"/> Establish the level of autonomy YouTubers will expect in content production and how this can be incorporated into the design of health messages. <input type="checkbox"/> Prioritise hosting messages on YouTuber’s own channels to maintain young audience’s trust, ensure wide reach and increase the chances of discovery. <input type="checkbox"/> Include evaluation options in early stages of collaborations to ensure YouTuber participation in process evaluation and sharing of social media metrics.
3) Formative research	<ul style="list-style-type: none"> <input type="checkbox"/> Take time to develop an understanding of the collaborating YouTubers’ previous content, characteristics and audience. <input type="checkbox"/> Assess the presence any poor quality or conflicting health messages in their previous content.
4) Intervention selection	<ul style="list-style-type: none"> <input type="checkbox"/> Make use of the YouTuber’s multiple social media platforms to increase reach and engagement. <input type="checkbox"/> Sustain message communication over these multiple channels. <input type="checkbox"/> Implement strategies to support YouTubers’ wider communication of health messages to their young audience (for example: comment monitoring, collaborative live streams) and the media. <input type="checkbox"/> Plan clear links between YouTuber health messages and other intervention components such as service provision or product distribution.
5) Development of content	<ul style="list-style-type: none"> <input type="checkbox"/> Create messages which focus on positive health-related norms and address peer pressure.

	<ul style="list-style-type: none"> <input type="checkbox"/> Where appropriate, use an ‘in conversation’ with a health professional format to lend the YouTuber expertise while allowing the them to maintain consistency and autonomy. <input type="checkbox"/> Include indicators of quality/accuracy to improve young people’s critical appraisal skills (e.g. cite sources, background information on sponsoring health organisation). <input type="checkbox"/> Incorporate signposting to accurate sources of health information. <input type="checkbox"/> Maintain consistency with the YouTuber’s persona.
6) Piloting and pretesting	<ul style="list-style-type: none"> <input type="checkbox"/> Pilot YouTuber videos to establish evidence of positive outcomes and cost-effectiveness. <input type="checkbox"/> Include process evaluation with YouTubers. <input type="checkbox"/> Seek engagement and feedback from young people within target audiences.

Reflective stop-off: Making an impact?

The impact of my work was something that troubled me from day one. Would people see my topic as too superficial? Would others see any public health benefit in this kind of work? It always felt like my research stood alone among what I perceived to be the more serious and worthwhile topics within my department like substance use, alcohol, sexual health, international health. When I presented my work as oral and poster presentations at conferences, I felt similar worries. My posters and talks would attract interest but not in the same way as the work of my PhD peers who were asked questions about their methods, results and theories. When I presented, a whole range of people would approach me including academic, professional service and library staff. Generally, they would be female and a parent or a grandparent who would tell me about their young family member’s YouTube watching habits. I remember one woman quite angrily approaching my poster, pointing at a picture of YT1 and saying, “She rules the roost in our house. Whatever I do my, 14 year old says ‘Mum, that’s not what YT1 would do!’”

Over the past three years, I have listened to parents who were concerned that their children watching toy unboxing videos was making them materialistic. They worried that their teenagers’ love of makeup tutorials was encouraging them to wear too much, too young. They were baffled why watching someone open a Kinder Egg on YouTube was more interesting than reading a book. They could not understand why watching someone play a game online was more appealing than going outside and playing

yourself. As these occasions became more and more frequent, I gradually realised that these conversations with parents were actually pointing to the impact of my work. These parental concerns were the things I myself was interested in. The impact of consumerism and sponsorship on health promotion. Whether the products, behaviours and social norms communicated by these YouTubers impacted on young people's behaviours. How YouTubers provided young people with a shared health experience that differed from their parents' experiences. Perhaps I could provide answers to some of the questions parents wanted to know.

What was apparent from these incidents was many of the parents saw YouTubers as entirely outside their own terms of reference. So many of the conversations began with "I just don't understand how they can like watching that" or "I've never watched them myself". I began to realise I had a somewhat privileged position. I had spoken to young people and they had trusted me with their views on the topic. I had spoken to the YouTubers, and I had taken time to watch their content. I could help answer the questions that mattered personally to so many parents. What is more, these parents and grandparents are part of the generation who currently form our public health professionals, teachers and policy makers. As the research progressed, I developed a greater understanding of an online sphere of health communication between YouTubers and young people which was continuing just outside of their glimpse but which had real potential to contribute to young people's health improvement.

9.3: Concluding Remarks

This research is the first to consider the role professional YouTubers play in young people's health behaviours in the UK. Prior to this research, the existing research evidence on the influence of YouTubers and the impact of social media on young people's health has been dispersed across public health, media and communication studies and the wider social sciences and humanities. While there is frequent speculation about the health impact of professional YouTubers in the national press, there have been no research studies that have explored this. The research findings therefore make an important contribution to knowledge on the influence of social media

on young people's health behaviours. This is timely due to increased attention being given to the health impacts of social media by the UK government (House of Commons Science and Technology Committee 2019).

This programme of research is the first to explore this issue using a mixed methods design, with such a large sample and amount of data. The findings from this research confirm that YouTubers are a recognised source of health information for young people (13-18 years) in the UK. YouTubers are producing content on a range of topics and have numerous perceived benefits for young people. A key strategy employed by YouTubers is their ability to foster a sense of community among their audience that cultivates familiarity and thus allows them to endorse health related products or behaviours. YouTubers were viewed as a role model by young viewers. These findings increase our understanding of the potential role YouTubers could play in young people's health improvement interventions. This understanding is particularly important given that there are already examples of public health agencies making use of YouTubers in campaigns (for example Rise Above (Public Health England 2017)) without established evidence of effectiveness. The research also highlighted a number of complexities in the production of YouTuber health content including YouTubers' reluctance to: expose themselves to criticism, compromise their brand and authenticity and engage in self-regulatory practices. This inherent tension between self-promotion and health promotion in YouTuber health content cannot be ignored, and the research therefore provides vital insights into the factors that will influence successful collaboration between public health organisations and YouTubers.

Overall, the research confirms that YouTubers have considerable potential to contribute to health improvement interventions for young people. The research presents a unique examination of the role professional YouTubers play in young people's health behaviours in the UK that can make important contributions to the public health evidence base. Importantly, this research relied on qualitative and quantitative insights from young people to generate the sampling frame, inform the design of subsequent stages and produce the research findings. The insights generated by this research could not have been generated without engaging with young people. This highlights that

public health organisations wishing to use social media in health improvement must recognise and be informed by young people's expertise.

References

- Abedin, T., Ahmed, S., Al Mamun, M., Ahmed, S.W., Newaz, S., Rumana, N. and Turin, T.C. (2015) 'YouTube as a source of useful information on diabetes foot care', *Diabetes Res Clin Pract*, 110(1), e1-4, available: <http://dx.doi.org/10.1016/j.diabres.2015.08.003>.
- Abidin, C. (2015) 'Introduction to Panel: Fame and Microcelebrity on the Web', in *Association of Internet Researchers Conference*, Phoenix, AZ.
- Abidin, C. (2016a) "'Aren't These Just Young, Rich Women Doing Vain Things Online?": Influencer Selfies as Subversive Frivolity', *Social Media + Society*, 2(2), available: <http://dx.doi.org/10.1177/2056305116641342>.
- Abidin, C. (2016b) *Please Subscribe! Influencers, Social Media, and the Commodification of Everyday Life*, unpublished thesis (PhD), University of Western Australia.
- Abidin, C. (2017) '#familygoals: Family Influencers, Calibrated Amateurism, and Justifying Young Digital Labor', *Social Media + Society*, 3(2), 1-15, available: <http://dx.doi.org/10.1177/2056305117707191>.
- Abidin, C. (2018) *Internet Celebrity. Understanding Fame Online*, London: Emerald.
- Advertising Standards Agency (2016) *Recognising Ads: Social Media*, available: <https://www.asa.org.uk/advice-online/recognising-ads-social-media.html> [accessed 21/11/2018].
- Ajzen, I. and Fishbein, M. (1980) *Understanding Attitudes and Predicting Social Behaviour*, Englewood Cliffs, NJ: Prentice-Hall.
- Albury, K., Hasinoff, A.A. and Senft, T. (2017) 'From Media Abstinence to Media Production: Sexting, Young People and Education' in Allen, L. and Rasmussen, M. L., eds., *The Palgrave Handbook of Sexuality Education*, London: Palgrave Macmillan UK, 527-545.
- Ali, K., Farrer, L., Gulliver, A. and Griffiths, K.M. (2015) 'Online Peer-to-Peer Support for Young People With Mental Health Problems: A Systematic Review', *JMIR Ment Health*, 2(2), e19, available: <http://dx.doi.org/10.2196/mental.4418>.
- Alvarez-Jimenez, M., Alcazar-Corcoles, M.A., Gonzalez-Blanch, C., Bendall, S., McGorry, P.D. and Gleeson, J.F. (2014) 'Online, social media and mobile technologies for psychosis treatment: a systematic review on novel user-led interventions', *Schizophr Res*, 156(1), 96-106, available: <http://dx.doi.org/10.1016/j.schres.2014.03.021>.
- Armour, K. and Duncombe, R. (2012) 'Changing lives? Critical evaluation of a school-based athlete role model intervention', *Sport, Education and Society*, 17(3), 381-403, available: <http://dx.doi.org/10.1080/13573322.2011.608941>.

- Armstrong, C., Hill, M. and Secker, J. (2000) 'Young people's perceptions of mental health', *Children & Society*, 14(1), 60-72, available: <http://dx.doi.org/doi:10.1111/j.1099-0860.2000.tb00151.x>.
- Arvidsson, A., Caliandro, A., Airoidi, M. and Barina, S. (2016) 'Crowds and value. Italian Directioners on Twitter', *Information, Communication & Society*, 19(7), 921-939, available: <http://dx.doi.org/10.1080/1369118X.2015.1064462>.
- Ashman, R., Patterson, A. and Brown, S. (2018) 'Don't forget to like, share and subscribe': Digital autpreneurs in a neoliberal world', *Journal of Business Research*, 92, 474-483, available: <http://dx.doi.org/10.1016/j.jbusres.2018.07.055>.
- Association for Young People's Health (2017) *Young Peoples Health. Where are we up to? Update 2017*, London: AYPH.
- Athanasopoulou, C., Suni, S., Hatonen, H., Apostolakis, I., Lionis, C. and Valimaki, M. (2015) 'Attitudes towards schizophrenia on YouTube: a content analysis of Finnish and Greek videos', *Inform Health Soc Care*, 1-18, available: <http://dx.doi.org/10.3109/17538157.2015.1008485>.
- Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., Foy, R., Duncan, E.M., Colquhoun, H., Grimshaw, J.M., Lawton, R. and Michie, S. (2017) 'A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems', *Implement Sci*, 12(1), 77, available: <http://dx.doi.org/10.1186/s13012-017-0605-9>.
- Atkinson, A.M., Ross-Houle, K.M., Begley, E. and Sumnall, H. (2016) 'An exploration of alcohol advertising on social networking sites: an analysis of content, interactions and young people's perspectives', *Addiction Research & Theory*, 25(2), 91-102, available: <http://dx.doi.org/10.1080/16066359.2016.1202241>.
- Atkinson, A.M. and Sumnall, H.R. (2016) 'If I don't look good, it just doesn't go up': A qualitative study of young women's drinking cultures and practices on Social Network Sites', *International Journal of Drug Policy*, 38, 50-62, available: <http://dx.doi.org/https://doi.org/10.1016/j.drugpo.2016.10.019>.
- Aufderheide, P. and Firestone, C.M. (1993) *Media Literacy: A Report of the National Leadership Conference on Media Literacy, the Aspen Institute Wye Center, Queenstown Maryland, December 7-9, 1992*, Communications and Society Program, the Aspen Institute.
- Austin, J.E. and Seitanidi, M.M. (2012) 'Collaborative Value Creation', *Nonprofit and Voluntary Sector Quarterly*, 41(5), 726-758, available: <http://dx.doi.org/10.1177/0899764012450777>.
- Ayo, N. (2012) 'Understanding health promotion in a neoliberal climate and the making of health conscious citizens', *Critical Public Health*, 22(1), 99-105, available: <http://dx.doi.org/10.1080/09581596.2010.520692>.
- Bagnall, G. (1998) 'Use of tobacco, alcohol and drugs amongst thirteen year olds in three areas of Britain', *Drug Alcohol Depend*, 22, 241-251, available: [http://dx.doi.org/10.1016/0376-8716\(88\)90024-5](http://dx.doi.org/10.1016/0376-8716(88)90024-5).

- Bagnoli, A. and Clark, A. (2010) 'Focus groups with young people: a participatory approach to research planning', *Journal of Youth Studies*, 13(1), 101-119, available: <http://dx.doi.org/10.1080/13676260903173504>.
- Baker, S.E. and Edwards, R. (2012) *How many qualitative interviews is enough? Expert voices and early career reflections on sampling and cases in qualitative research*, London: NCRM.
- Bandura, A. (1977) *Social Learning Theory*, Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1982) 'Self-efficacy mechanism in human agency', *American Psychologist*, 37(2), 122-147, available: <http://dx.doi.org/10.1037/0003-066X.37.2.122>.
- Bandura, A. (1995) *Self-efficacy in changing societies*, Cambridge: Cambridge University Press.
- Barbovschi, M., Green, L. and Vandoninck, S. (2013) *Innovative approaches for investigating how children understand risk in new media. Dealing with methodological and ethical challenges*, London: EU Kids Online, LSE.
- Bardone-Cone, A.M. and Cass, K.M. (2006) 'Investigating the impact of pro-anorexia websites: a pilot study', *European Eating Disorders Review*, 14(4), 256-262, available: <http://dx.doi.org/10.1002/erv.714>.
- Barry, A.E., Johnson, E., Rabre, A., Darville, G., Donovan, K.M. and Efunbumi, O. (2015) 'Underage access to online alcohol marketing content: a YouTube case study', *Alcohol Alcohol*, 50(1), 89-94, available: <http://dx.doi.org/10.1093/alcalc/agu078>.
- Bartlett, J. and Miller, C. (2011) *Truth, lies and the internet. A report into Young People's Digital Fluency*, London: Demos.
- Bazeley, P. (2010) 'Computer-Assisted Intergration of Mixed Methods Data Sources and Analysis' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Beaulieu, A. (2004) 'Mediating ethnography: objectivity and the making of ethnographies of the internet', *Social Epistemology*, 18(2-3), 139-163, available: <http://dx.doi.org/10.1080/0269172042000249264>.
- Beck, C.S., Aubuchon, S.M., McKenna, T.P., Ruhl, S. and Simmons, N. (2014) 'Blurring personal health and public priorities: an analysis of celebrity health narratives in the public sphere', *Health Commun*, 29(3), 244-56, available: <http://dx.doi.org/10.1080/10410236.2012.741668>.
- Beer, D.D. (2008) 'Social network(ing) sites...revisiting the story so far: A response to danah boyd & Nicole Ellison', *Journal of Computer-Mediated Communication*, 13(2), 516-529, available: <http://dx.doi.org/10.1111/j.1083-6101.2008.00408.x>.
- Beninger, K. (2017) 'Social Media User's Views on the Ethics of Social Media Research' in Sloan, L. and Quan-Haase, A., eds., *The SAGE Handbook of Social Media Research Methods*, Thousand Oaks: SAGE.

- Beninger, K., Fry, A., Jago, N., Lepps, H., Nass, L. and Silverster, H. (2014) *Research Using Social Media; Users' Views*, London: NatCen.
- Bennett, A. (1999) 'Subcultures or neo-tribes? Rethinking the relationship between youth, style and musical taste', *Sociology*, 33(3), 599-617.
- Bennett, V. (2016) 'Building resilience by co-creating content for young people with young people!', 09/03/2019, available: <https://vivbennett.blog.gov.uk/2016/11/02/building-resilience-by-co-creating-content-for-young-people-with-young-people-by-jan-nixon/> [accessed 04/04/2018].
- Berger, J. and Milkman, K.L. (2012) 'What Makes Online Content Viral?', *Journal of Marketing Research*, 49(2), 192-205, available: <http://dx.doi.org/10.1509/jmr.10.0353>.
- Berryman, R. and Kavka, M. (2017) '‘I Guess A Lot of People See Me as a Big Sister or a Friend’: the role of intimacy in the celebrification of beauty vloggers', *Journal of Gender Studies*, 26(3), 307-320, available: <http://dx.doi.org/10.1080/09589236.2017.1288611>.
- Berryman, R. and Kavka, M. (2018) 'Crying on YouTube: Vlogs, self-exposure and the productivity of negative affect', *Convergence*, 24(1), 85-98, available: <http://dx.doi.org/10.1177/1354856517736981>.
- Bertlison, J. (2014) 'Critical Netnography: Conducting Critical Research Online' in Jeanes, E. and Huzzard, T., eds., *Critical Management Research: Reflections from the Field*, London: SAGE.
- Best, P., Manktelow, R. and Taylor, B. (2014) 'Online communication, social media and adolescent wellbeing: A systematic narrative review', *Children and Youth Services Review*, 41, 27-36, available: <http://dx.doi.org/10.1016/j.childyouth.2014.03.001>.
- Bezner, S.K., Hodgman, E.I., Diesen, D.L., Clayton, J.T., Minkes, R.K., Langer, J.C. and Chen, L.E. (2014) 'Pediatric surgery on YouTube: is the truth out there?', *J Pediatr Surg*, 49(4), 586-9, available: <http://dx.doi.org/10.1016/j.jpedsurg.2013.08.004>.
- Biesta, G. (2010) 'Pragmatism and the Philosophical Foundations of Mixed Methods Research' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Biskup, C. and Pfister, G. (1999) 'I Would Like to be Like Her/Him: Are Athletes Role-Models for Boys and Girls?', *European Physical Education Review*, 5(3), 199-218.
- Blank, G. and Lutz, C. (2017) 'Representativeness of Social Media in Great Britain: Investigating Facebook, LinkedIn, Twitter, Pinterest, Google+, and Instagram', *American Behavioral Scientist*, 61(7), 741-756, available: <http://dx.doi.org/10.1177/0002764217717559>.
- Blessell, T.L., McDonald, S., Sillagy, C.A., Anderson, J.A., Hiller, J.E. and Sansom, L.N. (2002) 'Do Internet Interventions for consumers cause more harm than good? A Systematic Review', *Health Expect*, 5, 28-37.

- Bloomberg, L.D. and Volpe, M. (2016) *Completing Your Qualitative Dissertation. A Road Map from Beginning to End*, Thousand Oaks, CA: SAGE.
- Boepple, L. and Thompson, J.K. (2014) 'A content analysis of healthy living blogs: evidence of content thematically consistent with dysfunctional eating attitudes and behaviors', *Int J Eat Disord*, 47(4), 362-7, available: <http://dx.doi.org/10.1002/eat.22244>.
- Bogner, A., Littig, B. and Menz, W. (2018) 'Generating Qualitative Data with Experts and Elites' in Flick, U., ed., *The SAGE Handbook of Qualitative Data Collection*, Thousand Oaks, CA: SAGE.
- Booth, M., Bernard, D., Quine, S., Kang, M., Usherwood, T., Alperstein, G. and Bennett, D. (2004) 'Access to health care among Australian adolescents young people's perspectives and their sociodemographic distribution', *Journal of Adolescent Health*, 34(1), 97-103, available: [http://dx.doi.org/10.1016/s1054-139x\(03\)00304-5](http://dx.doi.org/10.1016/s1054-139x(03)00304-5).
- Bou-Karroum, L., El-Jardali, F., Hemadi, N., Faraj, Y., Ojha, U., Shahrouh, M., Darzi, A., Ali, M., Doumit, C., Langlois, E.V., Melki, J., AbouHaidar, G.H. and Akl, E.A. (2017) 'Using media to impact health policy-making: an integrative systematic review', *Implement Sci*, 12(1), 52, available: <http://dx.doi.org/10.1186/s13012-017-0581-0>.
- Bourdieu, P. (1986) 'The Forms of Capital' in Richardson, J. G., ed., *Handbook of Theory and Research for the Sociology of Education*, New York: Greenwood Publishing Group, 241-258.
- Bourdieu, P. (1990) *The Logic of Practice*, California: Stanford University Press.
- Bowler, G.M. (2010) 'Netnography: A Method Specifically Designed to Study Cultures and Communities Online', *The Qualitative Report*, 15(5), 1270-1275.
- boyd, d. (2008) 'Why Youth heart Social Network Sites: The Role of Networked Publics in Teenage Social Life' in Buckingham, D., ed., *Youth, Identity and Digital Media*, Cambridge, MA: The MIT Press, 119-142.
- boyd, d. (2014) *It's Complicated. The Social Lives of Networked Teens*, Connecticut: Yale University Press.
- boyd, d., Golder, S. and Lotan, G. (2010) 'Tweet, Tweet, Retweet: Conversational Aspects of Retweeting on Twitter', in *43rd International Conference on System Sciences*, Hawaii, IEEE Computer Society.
- boyd, d.m. and Ellison, N.B. (2007) 'Social Network Sites: Definition, History, and Scholarship', *Journal of Computer-Mediated Communication*, 13(1), 210-230, available: <http://dx.doi.org/10.1111/j.1083-6101.2007.00393.x>.
- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), 77-101.
- Braun, V. and Clarke, V. (2014) 'What can "thematic analysis" offer health and wellbeing researchers?', *Int J Qual Stud Health Well-being*, 9, 26152, available: <http://dx.doi.org/10.3402/qhw.v9.26152>.

- Brennan, E., Durkin, S.J., Wakefield, M.A. and Kashima, Y. (2016) 'Talking About Antismoking Campaigns: What Do Smokers Talk About, and How Does Talk Influence Campaign Effectiveness?', *J Health Commun*, 21(1), 33-45, available: <http://dx.doi.org/10.1080/10810730.2015.1039675>.
- British Psychological Society (BPS) (2010) *Code of Human Research Ethics*, Leicester: BPS,.
- British Psychological Society (BPS) (2013) *Ethics Guidelines for Internet-Mediated Research*, Leicester: BPS,.
- British Sociological Association (2017) *Ethics Guidelines and Collated Resources for Digital Research. Statement of Ethical Practice Annex*, London: British Sociological Association.
- Brown, J.D., Halpern, C.T. and L'Engle, K.L. (2005) 'Mass media as a sexual super peer for early maturing girls', *Journal of Adolescent Health*, 36(5), 420-427, available: <http://dx.doi.org/10.1016/j.jadohealth.2004.06.003>.
- Brown, W.J., Basil, M.D. and Bocarnea, M.C. (2003) 'The influence of famous athletes on health beliefs and practices: Mark McGwire, child abuse prevention, and Androstenedione', *J Health Commun*, 8(1), 41-57, available: <http://dx.doi.org/10.1080/10810730305733>.
- Bryman, A. (2012) *Social Research Methods*, 4th Edition ed., Oxford: Oxford University Press.
- Buchanan, E. and Zimmer, M. (2012) 'Internet Research Ethics' in Zalta, E. N., ed., *The Stanford Encyclopedia of Philosophy*.
- Buchanan, L., Yeatman, H., Kelly, B. and Kariippanon, K. (2018) 'A thematic content analysis of how marketers promote energy drinks on digital platforms to young Australians', *Aust N Z J Public Health*, 42(6), 530-531, available: <http://dx.doi.org/10.1111/1753-6405.12840>.
- Buckingham, D. (2008) *Youth, Identity and Digital Media*, Cambridge, MA: The MIT Press.
- Bulger, M. and Livingstone, S. (2013) *Media literacy research and policy in Europe. A review of recent, current and planned activities*, Brussels, Belgium: European Cooperation in Science and Technology (COST).
- Burgess, J. and Green, J. (2008) 'The Entrepreneurial Vlogger: Participatory Culture Beyond the Professional-Amateur Divide' in Snickars, P. and Vonderau, P., eds., *The YouTube Reader*, Stockholm: National Library of Sweden.
- Burgess, J. and Green, J. (2018) *YouTube*, 2nd Edition ed., Cambridge: Polity.
- Burke Johnson, R. and Onwuegbuzie, J. (2004) 'Mixed Methods Research: A Research Paradigm whose time has come', *Educational Researcher*, 33(7), 14-26, available: <http://dx.doi.org/10.3102/0013189X033007014>.

- Byron, P. (2014) 'Social Media's Challenge to the Promotion of Young People's Sexual Health', in *Association of Internet Researchers Conference*, Daegu, Korea.
- Byron, P. (2015) 'Troubling expertise: social media and young people's sexual health', *Communication Research and Practice*, 1(4), 322-334, available: <http://dx.doi.org/10.1080/22041451.2015.1110085>.
- Byron, P., Albury, K. and Evers, C. (2013) "'It would be weird to have that on Facebook": young people's use of social media and the risk of sharing sexual health information', *Reproductive Health Matters*, 21(41), 35-44, available: [http://dx.doi.org/10.1016/s0968-8080\(13\)41686-5](http://dx.doi.org/10.1016/s0968-8080(13)41686-5).
- Cabinet Office (2014) *Risk Behaviours and Negative Outcomes.*, London: Horizon Scanning Programme Team. Cabinet Office.
- Carroll, J.A. and Kirkpatrick, R.L. (2011) *Impact of Social Media on Adolescent Behavioural Health*, Oakland, California: Adolescent Health Collaborative.
- Carron-Arthur, B., Ali, K., Cunningham, J.A. and Griffiths, K.M. (2015) 'From Help-Seekers to Influential Users: A Systematic Review of Participation Styles in Online Health Communities', *J Med Internet Res*, 17(12), e271, available: <http://dx.doi.org/10.2196/jmir.4705>.
- Carrotte, E.R., Vella, A.M. and Lim, M.S. (2015) 'Predictors of "Liking" Three Types of Health and Fitness-Related Content on Social Media: A Cross-Sectional Study', *J Med Internet Res*, 17(8), e205, available: <http://dx.doi.org/10.2196/jmir.4803>.
- CASP (2018) *Critical Appraisal Skills Programme Checklists*, available: <https://casp-uk.net/casp-tools-checklists/> [accessed 25/03/2019].
- Chamberlain, D. (2010) 'YouTube: Online Video and Participatory Culture, by Jean Burgess and Joshua Green', *Popular Communication*, 8(1), 96-98, available: <http://dx.doi.org/10.1080/15405700903502312>.
- Chang, T., Chopra, V., Zhang, C. and Woolford, S.J. (2013) 'The role of social media in online weight management: systematic review', *Journal of medical Internet research*, 15(11), e262-e262, available: <http://dx.doi.org/10.2196/jmir.2852>.
- Chau, M.M., Burgermaster, M. and Mamykina, L. (2018) 'The use of social media in nutrition interventions for adolescents and young adults-A systematic review', *Int J Med Inform*, 120, 77-91, available: <http://dx.doi.org/10.1016/j.ijmedinf.2018.10.001>.
- Chen, W. and Lee, K.-H. (2014) 'More than search? Informational and participatory eHealth behaviors', *Computers in Human Behavior*, 30, 103-109, available: <http://dx.doi.org/10.1016/j.chb.2013.07.028>.
- Cheney-Lippold, J. (2011) 'A New Algorithmic Identity', *Theory, Culture & Society*, 28(6), 164-181, available: <http://dx.doi.org/10.1177/0263276411424420>.
- Childwise (2018) *The Monitor Report 2018*, London: Childwise.

- Chou, W.S., Prestin, A., Lyons, C. and Yen, K. (2013) 'Web 2.0 for Health Promotion: Reviewing the Current Evidence', *American Journal of Public Health*, 103(1), 9-18, available: <http://dx.doi.org/10.2105/AJPH>.
- Christ, T.W. (2010) 'Teaching Mixed Methods and Action Research: Pedagogical, Practical, and Evaluative Considerations' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Clarke, V. and Braun, V. (2013) 'Teaching Thematic Analysis: Overcoming challenges and effective strategies for learning', *The Psychologist*, 26(2), 120-123.
- Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., Morgan, C., Rusch, N., Brown, J.S. and Thornicroft, G. (2015) 'What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies', *Psychol Med*, 45(1), 11-27, available: <http://dx.doi.org/10.1017/S0033291714000129>.
- Coates, A.E., Hardman, C., Halford, J., Christiansesn, P. and Boyland, E.J. (2019) 'Social Media Influencer Marketing and Children's Food Intake: A Randomized Control Trial', *Pediatrics*, 143(4).
- Cocker, H.L. and Cronin, J. (2017) 'Charismatic authority and the YouTuber: Unpacking the new cults of personality', *Marketing Theory*, 17(4), 455-472, available: <http://dx.doi.org/10.1177/1470593117692022>.
- Cole, J., Watkins, C. and Kleine, D. (2016) 'Health Advice from Internet Discussion Forums: How Bad Is Dangerous?', *J Med Internet Res*, 18(1), e4, available: <http://dx.doi.org/10.2196/jmir.5051>.
- Coleman, J. and Hagell, A. (2015) 'Young people, health and youth policy', *Youth and Policy*, 114, 17-30.
- Competition and Markets Authority (2019) *Celebrities pledge to clean up their act on social media* [press release], available: <https://www.gov.uk/government/news/celebrities-pledge-to-clean-up-their-act-on-social-media> [accessed
- Convery, I. and Cox, D. (2012) 'A review of research ethics in internet-based research', *Practitioner Research in Higher Education*, 6(1), 50-57.
- Correa, T. (2015) 'Digital skills and social media use: how Internet skills are related to different types of Facebook use among 'digital natives'', *Information, Communication & Society*, 19(8), 1095-1107, available: <http://dx.doi.org/10.1080/1369118x.2015.1084023>.
- Cotter, A.P., Durant, N., Agne, A.A. and Cherrington, A.L. (2014) 'Internet interventions to support lifestyle modification for diabetes management: a systematic review of the evidence', *J Diabetes Complications*, 28(2), 243-51, available: <http://dx.doi.org/10.1016/j.jdiacomp.2013.07.003>.
- Cresswell, J.W. and Plano Clark, V.L. (2011) *Designing and Conducting Mixed Methods Research*, 2nd Edition ed., Thousand Oaks, CA: SAGE.

- Creswell, J.W. (2003) *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*, 2nd ed., Thousand Oaks: SAGE.
- Creswell, J.W. (2013) *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, SAGE Publications.
- Creswell, J.W. and Plano Clark, V.L. (2007) *Designing and Conducting Mixed Methods Research*, Thousand Oaks: SAGE.
- Creswell, J.W. and Tashakkori, A. (2007) 'Differing Perspectives on Mixed Methods Research', *Journal of Mixed Methods Research*, 1(4), 303-308, available: <http://dx.doi.org/10.1177/1558689807306132>
- Crow, G., Wiles, R., Heath, S. and Charles, V. (2006) 'Research Ethics and Data Quality: The Implications of Informed Consent', *International Journal of Social Research Methodology*, 9(2), 83-95, available: <http://dx.doi.org/10.1080/13645570600595231>.
- Davies, H.C., Eynon, R. and Wilkin, S. (2017) 'Neoliberal gremlins? How a scheme to help disadvantaged young people thrive online fell short of its ambitions', *Information, Communication & Society*, 20(6), 860-875, available: <http://dx.doi.org/10.1080/1369118X.2017.1293131>.
- de Visser, R.O. and Smith, J.A. (2007) 'Alcohol consumption and masculine identity among young men', *Psychology & Health*, 22(5), 595-614, available: <http://dx.doi.org/10.1080/14768320600941772>.
- Deakin, H. and Wakefield, K. (2013) 'Skype interviewing: reflections of two PhD researchers', *Qualitative Research*, 14(5), 603-616, available: <http://dx.doi.org/10.1177/1468794113488126>.
- Denscombe, M. (2008) 'Communities of Practice', *Journal of Mixed Methods Research*, 2(3), 270-283, available: <http://dx.doi.org/10.1177/1558689808316807>.
- Denzin, N.K. (1978) *The Research Act: A Theoretical Introduction to Sociological Methods*, New York: McGraw-Hill.
- Denzin, N.K. (1986) 'Postmodern social theory', *Sociological Theory*, 4(2), 194-204.
- Denzin, N.K. (2012) 'Triangulation 2.0', *Journal of Mixed Methods Research*, 6(2), 80-88, available: <http://dx.doi.org/10.1177/1558689812437186>.
- Denzin, N.K. and Lincoln, Y.S. (2011) 'Introduction: The Discipline and Practice of Qualitative Research' in Denzin, N. K. and Lincoln, Y. S., eds., *The SAGE Handbook of Qualitative Research*, Thousand Oaks: SAGE, 2-25.
- Dexter, L.A. (2006) *Elite and Specialized Interviewing*, Oxford: ECPR classics.

- Digital Media Initiative (2015) *YouTube Data Tools*, available: http://help-ncapture.qsrinternational.com/desktop/topics/capture_from_youtube.htm [accessed 03/09/2018].
- Dorr, A. (1986) *Television and children: a special medium for a special audience*, Thousand Oaks, CA: SAGE Publications.
- Drotner, K. and Livingstone, S. (2008) 'Volume Introduction' in Livingstone, S., ed., *The International Handbook of Children, Media and Culutre*, London: SAGE.
- Duggan, M. and Smith, A. (2014) *Social Media Update 2013*, Washington DC: Pew Research Center.
- Dures, E., Rumsey, N., Morris, M. and Gleeson, K. (2011) 'Mixed methods in health psychology: theoretical and practical considerations of the third paradigm', *J Health Psychol*, 16(2), 332-41, available: <http://dx.doi.org/10.1177/1359105310377537>.
- Dutta-Bergman, M.J. (2004) 'Complementarity in consumption of news types across traditional and new media', *Journal of Broadcasting & Electronic Media*, 48(1), 41-60, available: http://dx.doi.org/DOI 10.1207/s15506878jobem4801_3.
- Dworkin, S.L. (2012) 'Sample size policy for qualitative studies using in-depth interviews', *Arch Sex Behav*, 41(6), 1319-20, available: <http://dx.doi.org/10.1007/s10508-012-0016-6>.
- Dyer, H.T. (2017) 'The Presentation of Selfie in Everyday Life: Considering the Relationship Between Social Media Design and User in the Online Actions and Interactions of Young People', in *Proceedings of the 8th International Conference on Social Media & Society*, Toronto, ON, Canada, 3097292: ACM, 1-11, available: <http://dx.doi.org/10.1145/3097286.3097292>.
- Dyson, M.P., Hartling, L., Shulhan, J., Chisholm, A., Milne, A., Sundar, P., Scott, S.D. and Newton, A.S. (2016) 'A Systematic Review of Social Media Use to Discuss and View Deliberate Self-Harm Acts', *PLoS One*, 11(5), e0155813, available: <http://dx.doi.org/10.1371/journal.pone.0155813>.
- Eagleton-Pierce, M. (2016) *Neoliberalism. The Key Concepts*, New York: Routledge.
- Eastin, M.S. and LaRose, R. (2000) 'Internet Self-Efficacy and the Psychology of the Digital Divide', *Journal of Computer-Mediated Communication*, 6(1), 0-0, available: <http://dx.doi.org/10.1111/j.1083-6101.2000.tb00110.x>.
- Eder, D. and Fingerson, L. (2001) 'Interviewing children and adolescents' in Gubrium, J. and Holstein, J., eds., *Handbook of Interview Research*, SAGE Publications, 181-201, available: <http://methods.sagepub.com/book/handbook-of-interview-research>.
- Elias, N. and Lemish, D. (2008) 'When all else fail: The Internet and adolescent-immigrants' in Drotner, K., ed., *Informal learning in digital media*, Cambridge: Cambridge UP, 139-157.
- Elkin, L. and Thomson, G. (2010) 'The extent of YouTube videos with smoking and smokefree words', *N Z Med J*, 123(1311), 93-4.

- Elkin, L., Thomson, G. and Wilson, N. (2010) 'Connecting world youth with tobacco brands: YouTube and the internet policy vacuum on Web 2.0', *Tob Control*, 19(5), 361-6, available: <http://dx.doi.org/10.1136/tc.2010.035949>.
- Ellcessor, E. (2012) 'Tweeting @feliciday: Online Social Media, Convergence, and Subcultural Stardom', *Cinema Journal*, 51(2), 46-66, available: <http://dx.doi.org/https://doi.org/10.1353/cj.2012.0010>.
- Elliott-Binns, C. (1973) 'An analysis of lay medicine', *The Journal of the Royal College of General Practitioners*, 23(129), 255.
- Elliott-Binns, C. (1986) 'An analysis of lay medicine: fifteen years later', *JR Coll Gen Pract*, 36(293), 542-544.
- Ellison, N. (2013) *Future Identities: Changing identities in the UK - the next 10 years*, London: Foresight.
- Emerson, R.M. (1976) 'Social Exchange Theory', *Annual Review of Sociology*, 2, 335-362.
- Emmel, N. (2013) *Sampling and Choosing Cases in Qualitative Research: A Realist Approach*, Thousand Oaks, CA: SAGE.
- Erdogan, B.Z., Baker, M.J. and Tagg, S. (2001) 'Selecting Celebrity Endorsers: The Practitioner's Perspective', *Journal of Advertising Research*, 41(3), 39-48, available: <http://dx.doi.org/10.2501/jar-41-3-39-48>.
- Evans, B.C., Coon, D.W. and Ume, E. (2011) 'Use of Theoretical Frameworks as a Pragmatic Guide for Mixed Methods Studies: A Methodological Necessity?', *Journal of Mixed Methods Research*, 5(4), 276-292.
- Eysenbach, G., Powell, J., Englesakis, M., Rizo, C. and Stern, A. (2004) 'Health related virtual communities and electronic support groups: a systematic review of the effects of online peer to peer interactions', *BMJ*, 328(7449), 1166.
- Eysenbach, G., Powell, J., Kuss, O. and Sa, E.R. (2002) 'Empirical studies assessing the quality of health information for consumers on the world wide web: a systematic review', *JAMA*, 287(20), 2691-700.
- Eysenbach, G. and Till, J.E. (2001) 'Ethical issues in qualitative research on internet communities', *BMJ*, 323(7321), 1103-1105, available: <http://dx.doi.org/10.1136/bmj.323.7321.1103>.
- Fardouly, J., Diedrichs, P.C., Vartanian, L.R. and Halliwell, E. (2015) 'Social comparisons on social media: the impact of Facebook on young women's body image concerns and mood', *Body Image*, 13, 38-45, available: <http://dx.doi.org/10.1016/j.bodyim.2014.12.002>.
- Farmer, S. and Porcellato, L. (2016) "'Thinking about drinking"; exploring children's perceptions of alcohol using Draw and Write tool', *Health Education*, 116(6), 541-560.

- Farmer, T., Robinson, K., Elliott, S.J. and Eyles, J. (2006) 'Developing and implementing a triangulation protocol for qualitative health research', *Qual Health Res*, 16(3), 377-94, available: <http://dx.doi.org/10.1177/1049732305285708>.
- Feltzer, Y. (2010) 'Doing Mixed Methods Research Pragmatically: Implications for the Rediscovery of Pragmatism as a Research Paradigm', *Journal of Mixed Methods Research*, 4(1), 6-16.
- Fergie, G., Hilton, S. and Hunt, K. (2015) 'Young adults' experiences of seeking online information about diabetes and mental health in the age of social media', *Health Expect*, available: <http://dx.doi.org/10.1111/hex.12430>.
- Fergie, G., Hunt, K. and Hilton, S. (2013) 'What young people want from health-related online resources: a focus group study', *J Youth Stud*, 16(5), 579-596, available: <http://dx.doi.org/10.1080/13676261.2012.744811>.
- Fetters, M.D., Curry, L.A. and Creswell, J.W. (2013) 'Achieving integration in mixed methods designs- principles and practices', *Health services research*, 48(6 Pt 2), 2134-2156, available: <http://dx.doi.org/10.1111/1475-6773.12117>.
- Fink, A. (2013) *Evidence-Based Public Health Practice*, Thousand Oaks: SAGE.
- Fishbein, M. (1980) 'A theory of reasoned action: Some applications and implications', *Nebr Symp Motiv*, 27, 65-115.
- Flick, U. (2017) 'Mantras and Myths: The Disenchantment of Mixed-Methods Research and Triangulation as a Perspective', *Qualitative Inquiry*, 23(1), 46-57.
- Flynn, M.A., Morin, D., Park, S.Y. and Stana, A. (2015) "'Let's Get This Party Started!": An Analysis of Health Risk Behavior on MTV Reality Television Shows', *J Health Commun*, 20(12), 1382-90, available: <http://dx.doi.org/10.1080/10810730.2015.1018608>.
- Francis, J.J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M.P. and Grimshaw, J.M. (2010) 'What is an adequate sample size? Operationalising data saturation for theory-based interview studies', *Psychol Health*, 25(10), 1229-45, available: <http://dx.doi.org/10.1080/08870440903194015>.
- Freeman, B. and Chapman, S. (2007) 'Is "YouTube" telling or selling you something? Tobacco content on the YouTube video-sharing website', *Tob Control*, 16(3), 207-10, available: <http://dx.doi.org/10.1136/tc.2007.020024>.
- Fry, J.P. and Neff, R.A. (2009) 'Periodic prompts and reminders in health promotion and health behavior interventions: systematic review', *J Med Internet Res*, 11(2), e16, available: <http://dx.doi.org/10.2196/jmir.1138>.
- Fuchs, C. (2017) *Social Media: A Critical Introduction*, SAGE Publications.

- Gabarron, E., Fernandez-Luque, L., Armayones, M. and Lau, A.Y. (2013) 'Identifying Measures Used for Assessing Quality of YouTube Videos with Patient Health Information: A Review of Current Literature', *Interact J Med Res*, 2(1), e6, available: <http://dx.doi.org/10.2196/ijmr.2465>.
- Gaiser, T.J. (1997) 'Conducting On-Line Focus Groups:A Methodological Discussion', *Social Science Computer Review*, 15(2), 135-144, available: <http://dx.doi.org/10.1177/089443939701500202>.
- Gamson, J. (2011) 'The Unwatched Life Is Not Worth Living: The Elevation of the Ordinary in Celebrity Culture', *Pmla*, 126(4), 1061-1069, available: <http://dx.doi.org/10.1632/pmla.2011.126.4.1061>.
- Gannon, V. and Prothero, A. (2018) 'Beauty bloggers and YouTubers as a community of practice', *Journal of Marketing Management*, 34(7-8), 592-619, available: <http://dx.doi.org/10.1080/0267257X.2018.1482941>.
- García-Rapp, F. (2017) 'Popularity markers on YouTube's attention economy: the case of Bubzbeauty', *Celebrity Studies*, 8(2), 228-245, available: <http://dx.doi.org/10.1080/19392397.2016.1242430>.
- Garg, N., Venkatraman, A., Pandey, A. and Kumar, N. (2015) 'YouTube as a source of information on dialysis: a content analysis', *Nephrology (Carlton)*, 20(5), 315-20, available: <http://dx.doi.org/10.1111/nep.12397>.
- Gauntlett, D. (2008) *Media, Gender and Identity. An Introduction*, New York: Routledge.
- Germain, J., Harris, J., Mackay, S. and Maxwell, C. (2017) 'Why Should We Use Online Research Methods? Four Doctoral Health Student Perspectives', *Qual Health Res*, Online First, available: <http://dx.doi.org/10.1177/1049732317721698>.
- Ghaznavi, J. and Taylor, L.D. (2015) 'Bones, body parts, and sex appeal: An analysis of #thinspiration images on popular social media', *Body Image*, 14, 54-61, available: <http://dx.doi.org/10.1016/j.bodyim.2015.03.006>.
- Gibbons, F.X., Gerrard, M., Blanton, H. and Russell, D.W. (1998) 'Reasoned action and social reaction: Willingness and intention as independent predictors of health risk', *Journal of Personality and Social Psychology*, 74(5), 1164-1180, available: <http://dx.doi.org/10.1037/0022-3514.74.5.1164>.
- Gibson, F. (2007) 'Conducting Focus Groups with Children and Young People: Strategies for Success', *Journal of Research in Nursing*, 12(5), 473-483, available: <http://dx.doi.org/10.1177/17449871079791>.
- Gibson, J.E. (2012) 'Interviews and Focus Groups With Children: Methods That Match Children's Developing Competencies', *Journal of Family Theory & Review*, 4(2), 148-159, available: <http://dx.doi.org/10.1111/j.1756-2589.2012.00119.x>.
- Giddens, A. (1991) *Modernity and Self-Identity. Self and Society in the Late Modern Age*, California: Stanford University Press.

- Giles, D.C. and Maltby, J. (2004) 'The role of media figures in adolescent development: relations between autonomy, attachment, and interest in celebrities', *Personality and Individual Differences*, 36(4), 813-822, available: [http://dx.doi.org/10.1016/s0191-8869\(03\)00154-5](http://dx.doi.org/10.1016/s0191-8869(03)00154-5).
- Gillin, P. (2008) 'New Media, New Influencers and implications for the Public Relations Profession', *Journal of New Communications Research*, 2(2).
- Glatt, Z. (2017) *The Commodification of YouTube Vloggers*, unpublished thesis (MA Digital Media), Goldsmiths, University of London.
- Goffman, E. (1959) *The Presentation of the self in Everyday Life*, New York: Random House.
- Gold, J., Pedrana, A.E., Sacks-Davis, R., Hellard, M., Chang, S., Howard, S., Keogh, L., Hocking, J.S. and Stooze, M. (2011) 'A systematic examination of the use of online social networking sites for sexual health promotion', *BMC Public Health*, 11, 583.
- Gold, J., Pedrana, A.E., Stooze, M.A., Chang, S., Howard, S., Asselin, J., Ilic, O., Batrouney, C. and Hellard, M.E. (2012) 'Developing health promotion interventions on social networking sites: recommendations from The FaceSpace Project', *J Med Internet Res*, 14(1), e30, available: <http://dx.doi.org/10.2196/jmir.1875>.
- Gonzalez-Estrada, A., Cuervo-Pardo, L., Ghosh, B., Smith, M., Pazheri, F., Zell, K., Wang, X.F. and Lang, D.M. (2015) 'Popular on YouTube: a critical appraisal of the educational quality of information regarding asthma', *Allergy Asthma Proc*, 36(6), e121-6, available: <http://dx.doi.org/10.2500/aap.2015.36.3890>.
- Goodyear, V.A., Armour, K. and Wood, H. (2018a) *The impact of social media on young people's health and wellbeing: Evidence, guidelines and actions.*, Birmingham: University of Birmingham, available: <http://epapers.bham.ac.uk/3070/> [accessed 04/04/2019].
- Goodyear, V.A., Armour, K.M. and Wood, H. (2018b) 'Young people and their engagement with health-related social media: new perspectives', *Sport, Education and Society*, 1-16, available: <http://dx.doi.org/10.1080/13573322.2017.1423464>.
- Gorard, S. (2010) 'Research Design, as Independent of Methods' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Gore, P. and Madhavan, S. (1993) 'Credibility of the sources of information for non-prescription medicines', *Journal of Social and Administrative Pharmacy*, 10, 109-109.
- Grant, M.J. and Booth, A. (2009) 'A typology of reviews: an analysis of 14 review types and associated methodologies', *Health Info Libr J*, 26(2), 91-108, available: <http://dx.doi.org/10.1111/j.1471-1842.2009.00848.x>.
- Gray, N.J., Klein, J.D., Noyce, P.R., Sesselberg, T.S. and Cantrill, J.A. (2005a) 'Health information-seeking behaviour in adolescence: the place of the internet', *Soc Sci Med*, 60(7), 1467-78, available: <http://dx.doi.org/10.1016/j.socscimed.2004.08.010>.

- Gray, N.J., Klein, J.D., Noyce, P.R., Sesselberg, T.S. and Cantrill, J.A. (2005b) 'The Internet: a window on adolescent health literacy', *J Adolesc Health*, 37(3), 243, available: <http://dx.doi.org/10.1016/j.jadohealth.2004.08.023>.
- Greene, J.C. (2008) 'Is Mixed Methods Social Inquiry a Distinctive Methodology?', *Journal of Mixed Methods Research*, 2(1), 7-22.
- Greene, J.C., Caracelli, V.J. and Graham, W.F. (1989) 'Toward a Conceptual Framework for Mixed-Method Evaluation Designs', *Educational Evaluation and Policy Analysis*, 11(3), 255-274, available: <http://dx.doi.org/10.3102/01623737011003255>.
- Greene, J.C. and Hall, J.N. (2010) 'Dialectics and Pragmatism: Being of Consequence' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Griffiths, R. and Casswell, S. (2010) 'Intoxicogenic digital spaces? Youth, social networking sites and alcohol marketing', *Drug and Alcohol Review*, 29(5), 525-530, available: <http://dx.doi.org/10.1111/j.1465-3362.2010.00178.x>.
- Guba, E.G. (1981) 'Criteria for assessing the trustworthiness of naturalistic inquiries', *Ectj*, 29(2), 75-91.
- Guest, G., Namey, E. and McKenna, K. (2016) 'How Many Focus Groups Are Enough? Building an Evidence Base for Nonprobability Sample Sizes', *Field Methods*, 29(1), 3-22, available: <http://dx.doi.org/10.1177/1525822x16639015>.
- Gulliver, A., Griffiths, K.M. and Christensen, H. (2010) 'Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review', *BMC Psychiatry*, 10, 113-121, available: <http://dx.doi.org/10.1186/1471-244X-10-113>.
- Guse, K., Levine, D., Martins, S., Lira, A., Gaarde, J., Westmorland, W. and Gilliam, M. (2012) 'Interventions using new digital media to improve adolescent sexual health: a systematic review', *J Adolesc Health*, 51(6), 535-43, available: <http://dx.doi.org/10.1016/j.jadohealth.2012.03.014>.
- Hagell, A. and Coleman, J. (2014) *Young People's Health. Update 2014*, London: Association for Young People's Health.
- Hale, T.M. (2013) 'Is There Such a Thing as an Online Health Lifestyle?', *Information, Communication & Society*, 16(4), 501-518, available: <http://dx.doi.org/10.1080/1369118x.2013.777759>.
- Hall, R. (2012) 'Mixed Methods: In Search of a Paradigm', in *International Conference: Innovative Research in a Changing and Challenging World*, Phuket, Thailand.
- Hamm, M.P., Shulhan, J., Williams, G., Milne, A., Scott, S.D. and Hartling, L. (2014) 'A systematic review of the use and effectiveness of social media in child health', *BMC Pediatr*, 14, 138-152, available: <http://dx.doi.org/10.1186/1471-2431-14-138>.

- Harris, J. and Porcellato, L. (2018) 'Opt-Out Parental Consent in Online Surveys: Ethical Considerations', *Journal of Empirical Research on Human Research Ethics*, 13(3), 223-229, available: <http://dx.doi.org/10.1177/1556264618766953>.
- Hassani, S.N. (2006) 'Locating digital divides at home, work, and everywhere else', *Poetics*, 34(4-5), 250-272, available: <http://dx.doi.org/10.1016/j.poetic.2006.05.007>.
- Hassona, Y., Taimeh, D., Marahleh, A. and Scully, C. (2015) 'YouTube as a source of information on mouth (oral) cancer', *Oral Dis*, available: <http://dx.doi.org/10.1111/odi.12434>.
- Hearn, A. (2008) 'Meat, Mask, Burden', *Journal of Consumer Culture*, 8(2), 197-217, available: <http://dx.doi.org/doi:10.1177/1469540508090086>.
- Heath, S., Brooks, R., Cleaver, E. and Ireland, E. (2009) *Researching Young People's Lives*, Thousand Oaks, CA: SAGE.
- Hennick, M.M. (2007) *International Focus Group Research: a Handbook for the Health and Social Sciences*, Cambridge: Cambridge University Press.
- Hesse, B.W., Nelson, D.E., Kreps, G.L., Croyle, R.T., Arora, N.J., Rimer, B.K. and Viswanath, K. (2005) 'Trust and Sources of Health Information. The Impact of the Internet and Its Implications for Health Care Providers: Findings From the First Health Information National Trends Survey', *Arch Intern Med*, 165, 2618-2624.
- Hewison, J. and Haines, A. (2006) 'Overcoming barriers to recruitment in health research', *BMJ*, 333(7562), 300-302, available: <http://dx.doi.org/10.1136/bmj.333.7562.300>.
- Hewson, C. (2006) 'Mixed Methods' in Jupp, V., ed., *The Sage Dictionary of Social Research Methods*, London: SAGE.
- Hillier, L., Mitchell, K.J. and Ybarra, M.L. (2012) 'The Internet as a safety net: Findings from a series of online focus groups with LGB and non-LGB young people in the United States', *Journal of LGBT Youth*, 9(3), 225-246.
- Hinchcliffe, V. and Gavin, H. (2009) 'Social and Virtual Networks: Evaluating Synchronous Online Interviewing Using Instant Messenger', *The Qualitative Report*, 14(2), 318-340.
- Hine, C. (2005) *Virtual Methods. Issues in Social Research on the Internet*, New York: Bloomsbury.
- Hinnant, A. and Hendrickson, E. (2012) 'Rhetorical visions of health: a fantasy-theme analysis of celebrity articles', *Celebrity Studies*, 3(2), 197-212, available: <http://dx.doi.org/10.1080/19392397.2012.679459>.
- Ho, M., Stothers, L., Lazare, D., Tsang, B. and Macnab, A. (2015) 'Evaluation of educational content of YouTube videos relating to neurogenic bladder and intermittent catheterization', *Can Urol Assoc J*, 9(9-10), 320-54, available: <http://dx.doi.org/10.5489/cuaj.2955>.

- Hoffman, S.J. and Tan, C. (2013) 'Following celebrities' medical advice: meta-narrative analysis', *BMJ*, 347(dec17 14), f7151-f7151, available: <http://dx.doi.org/10.1136/bmj.f7151>.
- Hoffman, S.J. and Tan, C. (2015) 'Biological, psychological and social processes that explain celebrities' influence on patients' health-related behaviours', *Archives of Public Health*, 72(3), 1-11, available: <http://dx.doi.org/https://dx.doi.org/10.1186%2F2049-3258-73-3>.
- Holland, G. and Tiggemann, M. (2016) 'A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes', *Body Image*, 17, 100-10, available: <http://dx.doi.org/10.1016/j.bodyim.2016.02.008>.
- Hollander, J.A. (2004) 'The Social Contexts of Focus Groups', *Journal of Contemporary Ethnography*, 33(5), 602-637, available: <http://dx.doi.org/10.1177/0891241604266988>.
- Hopkins, P.E. (2007) 'Thinking critically and creatively about focus groups', *Area*, 39(4), 528-535, available: <http://dx.doi.org/10.1111/j.1475-4762.2007.00766.x>.
- House of Commons Science and Technology Committee (2019) *Impact of social media and screen-use on young people's health*, Westminster: House of Commons, available: <https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/822/822.pdf> [accessed 12/03/2019].
- House of Lords (2017) *Growing up with the Internet*, Westminster: Cabinet Office.
- Huang, G.C., Unger, J.B., Soto, D., Fujimoto, K., Pentz, M.A., Jordan-Marsh, M. and Valente, T.W. (2014) 'Peer influences: the impact of online and offline friendship networks on adolescent smoking and alcohol use', *J Adolesc Health*, 54(5), 508-14, available: <http://dx.doi.org/10.1016/j.jadohealth.2013.07.001>.
- Hughes, J. (2012) *SAGE Internet Research Methods*, SAGE, available: <https://methods.sagepub.com/book/sage-internet-research-methods> [accessed 2019/03/22].
- Hulme, M. (2015) *Life Support. Young people's needs in a digital age*, Lancaster: YouthNet.
- Inchley, J., Currie, D., Young, T., Samdal, O., Torbjorn, T., Augustson, E., Mathison, F., Aleman-Diaz, A., Molcho, M., Weber, M. and Barnekow, V. (2017) *Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviours in school-aged children (HBSC) study: international report from the 2013/2014 survey.*, Denmark: WHO Office for Europe.
- Inoue, Y., Yli-Piipari, S., Layne, T., Chambliss, H.O. and Irwin, C.C. (2015) 'A preliminary study of a professional sport organization's family-centered health promotion initiative', *International Review on Public and Nonprofit Marketing*, 12(2), 189-205, available: <http://dx.doi.org/10.1007/s12208-015-0135-6>.
- Ito, M., Baumer, S., Bittani, M., boyd, D., Cody, R., Herr-Stephenson, B., Horst, H.A., Lange, P.G., Mahendran, D., Martinez, K.Z., Pascoe, C.J., Perkel, D., Robinson, L., Sims, C. and Tripp, L. (2010) *Hanging out, Messing Around and Geeking Out*, Cambridge, MA: The MIT Press.

- James, C., Davis, K., Flores, A., Francis, J.M., Pettingill, L., Rundle, M. and Gardner, H. (2009) *Young People, Ethics and the New Social Media. A Synthesis from the Good Play Project*, Cambridge, MA: The MIT Press.
- James, N. and Busher, H. (2014) 'Internet Interviewing' in Gubrium, J. F., Holstein, J., Marvasti, A. and McKinney, K., eds., *The SAGE Handbook of Interview Research: The Complexity of the Craft*, Thousand Oaks: SAGE.
- Jenkins, H. (2006) *Convergence Culture: Where Old and New Media Collide*, New York: NYU Press.
- Jernigan, D.H. and Rushman, A.E. (2014) 'Measuring youth exposure to alcohol marketing on social networking sites: challenges and prospects', *J Public Health Policy*, 35(1), 91-104, available: <http://dx.doi.org/10.1057/jphp.2013.45>.
- Jerslev, A. (2016) 'In the Time of the Microcelebrity: Celebification and the YouTuber Zoella', *International Journal of Communication*, 10, 5233–5251, available: <http://dx.doi.org/1932-8036/20160005>
- Johnson, B. and Gray, R. (2010) 'A History of Philosophical and Theoretical Issues for Mixed Methods Research' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Johnson, R.B. and Onwuegbuzie, A.J. (2004) 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', *Educational Researcher*, 33(7), 14-26, available: <http://dx.doi.org/https://doi.org/10.3102%2F0013189X033007014>.
- Johnson, R.B., Onwuegbuzie, A.J. and Turner, L.A. (2007) 'Toward a Definition of Mixed Methods Research', *Journal of Mixed Methods Research*, 1(112), 112-133, available: <http://dx.doi.org/10.1177/1558689806298224>
- Jones, K., Eathington, P., Baldwin, K. and Sipsma, H. (2014) 'The impact of health education transmitted via social media or text messaging on adolescent and young adult risky sexual behavior: a systematic review of the literature', *Sex Transm Dis*, 41(7), 413-9, available: <http://dx.doi.org/10.1097/OLQ.0000000000000146>.
- Kable, A.K., Pich, J. and Maslin-Prothero, S.E. (2012) 'A structured approach to documenting a search strategy for publication: a 12 step guideline for authors', *Nurse Educ Today*, 32(8), 878-86, available: <http://dx.doi.org/10.1016/j.nedt.2012.02.022>.
- Kamberelis, G. and Dimitriadis, G. (2008) 'Focus Groups. Strategic Articulations of Pedagogy, Politics and Inquiry' in Denzin, N. K. and Lincoln, Y. S., eds., *Collecting and Interpreting Qualitative Materials*, 3rd ed., Thousand Oaks: SAGE, 375-402.
- Kaplowitz, M.D., Hadlock, T.D. and Levine, R. (2004) 'A Comparison of Web and Mail Survey Response Rates', *Public Opinion Quarterly*, 68(1), 94-101, available: <http://dx.doi.org/10.1093/poq/nfh006>.

- Keelan, J., Pavri-Garcia, V., Tomlinson, G. and Wilson, K. (2007) 'YouTube as a source of information on immunization: a content analysis', *JAMA*, 298(21), 2482-4, available: <http://dx.doi.org/10.1001/jama.298.21.2482>.
- Kerson, T.S. (2012) 'Epilepsy postings on YouTube: exercising individuals' and organizations' right to appear', *Soc Work Health Care*, 51(10), 927-43, available: <http://dx.doi.org/10.1080/00981389.2012.712634>.
- Khamis, S., Ang, L. and Welling, R. (2017) 'Self-branding, 'micro-celebrity' and the rise of Social Media Influencers', *Celebrity Studies*, 8(2), 191-208, available: <http://dx.doi.org/10.1080/19392397.2016.1218292>.
- Kim, K., Paek, H.J. and Lynn, J. (2010) 'A content analysis of smoking fetish videos on YouTube: regulatory implications for tobacco control', *Health Commun*, 25(2), 97-106, available: <http://dx.doi.org/10.1080/10410230903544415>.
- Klassen, K.M., Douglass, C.H., Brennan, L., Truby, H. and Lim, M.S.C. (2018) 'Social media use for nutrition outcomes in young adults: a mixed-methods systematic review', *Int J Behav Nutr Phys Act*, 15(1), 70-87, available: <http://dx.doi.org/10.1186/s12966-018-0696-y>.
- Korda, H. and Itani, Z. (2013) 'Harnessing social media for health promotion and behavior change', *Health Promot Pract*, 14(1), 15-23, available: <http://dx.doi.org/10.1177/1524839911405850>.
- Kozinets, R.V. (1998) 'On netnography: Initial reflections on consumer research investigations of cyberculture', *ACR North American Advances*, 25, 366-371.
- Kozinets, R.V. (2002) 'The Field Behind the Screen: Using Netnography for Market Research in Online Communities', *Journal of Marketing Research*, 39, 61-72, available: <http://dx.doi.org/https://doi.org/10.1509%2Fjmk.39.1.61.18935>.
- Kozinets, R.V. (2015) *Netnography: redefined*, 2nd ed., London: SAGE.
- Kroll, T., Barbour, R. and Harris, J. (2007) 'Using focus groups in disability research', *Qualitative Health Research*, 17(5), 690-698, available: <http://dx.doi.org/https://doi.org/10.1177/1049732307301488>.
- Krosnick, J. (1991) 'Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys', *Applied Cognitive Psychology*, 5, 213-236, available: <http://dx.doi.org/https://doi.org/10.1002/acp.2350050305>.
- Krotoski, A. (2010) 'Who are you? The little details to remember when gathering information about the people behind the screens', in *Science Online*, British Library, 4/09/2010.
- Krueger, R.A. and Casey, M.A. (2015) *Focus Groups. A Practical Guide for Applied Research*, Thousand Oaks: SAGE.

- Langer, R. and Beckman, S.C. (2005) 'Sensitive research topics: netnography revisited', *Qualitative Market Research: An International Journal*, 8(2), 189-203, available: <http://dx.doi.org/10.1108/13522750510592454>.
- Laranjo, L., Arguel, A., Neves, A.L., Gallagher, A.M., Kaplan, R., Mortimer, N., Mendes, G.A. and Lau, A.Y. (2015) 'The influence of social networking sites on health behavior change: a systematic review and meta-analysis', *J Am Med Inform Assoc*, 22(1), 243-56, available: <http://dx.doi.org/10.1136/amiajnl-2014-002841>.
- Lau, A.Y., Gabarron, E., Fernandez-Luque, L. and Armayones, M. (2012) 'Social media in health--what are the safety concerns for health consumers?', *HIM J*, 41(2), 30-5, available: <http://dx.doi.org/https://doi.org/10.1177%2F183335831204100204>.
- Lavorgna, A. and Sugiura, L. (2018) 'Caught in a Lie: The Rise and Fall of a Respectable Deviant', *Deviant Behavior*, 1-14, available: <http://dx.doi.org/10.1080/01639625.2018.1456724>.
- Lavrakas, P. (2008) *Encyclopedia of Survey Research Methods*, Thousand Oaks, CA: SAGE.
- Leech, N.L. (2010) 'Interviews with the Early Developers of Mixed Methods Research' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Lenhart, A., Purcell, K., Amith, A. and Sickuhr, K. (2010) *Social media and mobile internet use among teens and young adults*, Washington DC: Pew Internet and American Life Project.
- Lewis, S. (2006) 'Seeking health information on the internet: lifestyle choice or bad attack of cyberchondria?', *Media, Culture & Society*, 28(4), 521-539, available: <http://dx.doi.org/https://doi.org/10.1177%2F0163443706065027>.
- Lewis, S.P., Heath, N.L., Sornberger, M.J. and Arbuthnott, A.E. (2012) 'Helpful or harmful? An examination of viewers' responses to nonsuicidal self-injury videos on YouTube', *J Adolesc Health*, 51(4), 380-5, available: <http://dx.doi.org/10.1016/j.jadohealth.2012.01.013>.
- Lewis, S.P., Heath, N.L., St Denis, J.M. and Noble, R. (2011) 'The scope of nonsuicidal self-injury on YouTube', *Pediatrics*, 127(3), e552-7, available: <http://dx.doi.org/10.1542/peds.2010-2317>.
- Liamputtong, P. (2011) *Focus Group Methodology: Principles and Practice*, Thousand Oaks, CA: SAGE.
- Lim, S. (2013) 'Media and Peer Culture: Young people sharing norms and collective identities with and through the media' in Lemish, D., ed., *Routledge Handbook of Children, Adolescents and Media*, New York: Routledge, 322-328.
- Lincoln, S. and Robards, B. (2016) 'Editing the project of the self: sustained Facebook use and growing up online', *Journal of Youth Studies*, 1-14, available: <http://dx.doi.org/10.1080/13676261.2016.1241869>.
- Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic Inquiry*, Beverly Hills, CA: SAGE.

- Lincoln, Y.S. and Guba, E.G. (2000) 'Pragmatic controversies, contradictions, and emerging confluences' in Denzin, N. K. and Lincoln, Y. S., eds., *The Handbook of Qualitative Research*, 2nd ed., Thousand Oaks: SAGE, 1065-1122.
- Lines, G. (2001) 'Villains, fools or heroes? Sports stars as role models for young people ', *Leisure Studies*, 20(4), 285-303, available: <http://dx.doi.org/10.1080/02614360110094661>.
- Linkletter, M., Gordon, K. and Dooley, J. (2010) 'The choking game and YouTube: a dangerous combination', *Clin Pediatr (Phila)*, 49(3), 274-9, available: <http://dx.doi.org/10.1177/0009922809339203>.
- Litt, E. and Hargittai, E. (2014) 'A bumpy ride on the information superhighway: Exploring turbulence online', *Comput Human Behav*, 36, 520-529.
- Litt, E. and Hargittai, E. (2016) 'The Imagined Audience on Social Network Sites', *Social Media + Society*, 2(1), 1-12, available: <http://dx.doi.org/doi:10.1177/2056305116633482>.
- Livingston, J.D., Cianfrone, M., Korf-Uzan, K. and Coniglio, C. (2014) 'Another time point, a different story: one year effects of a social media intervention on the attitudes of young people towards mental health issues', *Soc Psychiatry Psychiatr Epidemiol*, 49(6), 985-90, available: <http://dx.doi.org/10.1007/s00127-013-0815-7>.
- Livingston, J.D., Tugwell, A., Korf-Uzan, K., Cianfrone, M. and Coniglio, C. (2013) 'Evaluation of a campaign to improve awareness and attitudes of young people towards mental health issues', *Soc Psychiatry Psychiatr Epidemiol*, 48(6), 965-73, available: <http://dx.doi.org/10.1007/s00127-012-0617-3>.
- Livingstone, S. (2004) 'What is media literacy?', *Intermedia*, 32(3), 18-20.
- Livingstone, S. (2008) 'Taking risky opportunities in youthful content creation: teenagers' use of social networking sites for intimacy, privacy and self-expression', *New Media & Society*, 10(3), 393-411, available: <http://dx.doi.org/10.1177/1461444808089415>.
- Livingstone, S. (2011) *Media literacy: Ambitions, policies and measures*, London: London School of Economics.
- Livingstone, S. (2014) 'Developing social media literacy: How children learn to interpret risky opportunities on social network sites', *Communications*, 39(3), available: <http://dx.doi.org/10.1515/commun-2014-0113>.
- Livingstone, S. and Helsper, E.J. (2007) 'Gradations in digital inclusion: children, young people and the digital divide', *New Media & Society*, 9(4), 671-698, available: <http://dx.doi.org/10.1177/1461444807080335>.
- Livingstone, S. and Mason, J. (2015) *Sexual rights and Sexual Risks among Youth Online: a review of existing knowledge regarding children and young people's developing sexuality in relation to new media environments*, London: European NGO Alliance of Child Safety Online.

- Livingstone, S. and Sefton-Green, J. (2016) *The Class. Living and Learning in the Digital Age*, London: NYU Press.
- Livingstone, S. and Smith, P.K. (2014) 'Annual research review: Harms experienced by child users of online and mobile technologies: the nature, prevalence and management of sexual and aggressive risks in the digital age', *J Child Psychol Psychiatry*, 55(6), 635-54, available: <http://dx.doi.org/10.1111/jcpp.12197>.
- Lovelock, M. (2016) 'Is every YouTuber going to make a coming out video eventually?': YouTube celebrity video bloggers and lesbian and gay identity', *Celebrity Studies*, 8(1), 87-103, available: <http://dx.doi.org/10.1080/19392397.2016.1214608>.
- Luo, C., Zheng, X., Zeng, D.D. and Leischow, S. (2014) 'Portrayal of electronic cigarettes on YouTube', *BMC Public Health*, 14, 1028, available: <http://dx.doi.org/10.1186/1471-2458-14-1028>.
- Lupton, D. (2015) 'Health promotion in the digital era: a critical commentary', *Health Promot Int*, 30(1), 174-83, available: <http://dx.doi.org/10.1093/heapro/dau091>.
- Luxton, D.D., June, J.D. and Fairall, J.M. (2012) 'Social Media and Suicide: A Public Health Perspective', *American Journal of Public Health*, 102(S2), S195-S200, available: <http://dx.doi.org/10.2105/ajph.2011.300608>.
- Lyons, A.C., Goodwin, I., McCreanor, T. and Griffin, C. (2015) 'Social networking and young adults' drinking practices: innovative qualitative methods for health behavior research', *Health Psychol*, 34(4), 293-302, available: <http://dx.doi.org/10.1037/hea0000168>.
- MacDonald, P. (2014) 'Narcissism in the modern world', *Psychodynamic Practice*, 20(2), 144-153, available: <http://dx.doi.org/10.1080/14753634.2014.894225>.
- Madathil, K.C., Rivera-Rodriguez, A.J., Greenstein, J.S. and Gramopadhye, A.K. (2015) 'Healthcare information on YouTube: A systematic review', *Health Informatics J*, 21(3), 173-94, available: <http://dx.doi.org/10.1177/1460458213512220>.
- Madden, M., Lenhart, A., Duggan, M., Cortesi, S. and Gasser, U. (2013) *Teens and Technology 2013*, Washington: Pew Internet Project.
- Madriz, E. (2003) 'Focus Groups in Feminist Research' in Denzin, N. K. and Lincoln, Y. S., eds., *Handbook of Qualitative Research*, 2nd ed., Thousand Oaks: SAGE.
- Maffesoli, M. (1995) *The time of the tribes: The decline of individualism in mass society*, Thousand Oaks, CA: SAGE.
- Maher, C.A., Lewis, L.K., Ferrar, K., Marshall, S., De Bourdeaudhuij, I. and Vandelanotte, C. (2014) 'Are health behavior change interventions that use online social networks effective? A systematic review', *Journal of medical Internet research*, 16(2), e40-e40, available: <http://dx.doi.org/10.2196/jmir.2952>.

- Mann, C. and Stewart, F. (2000) *Internet Communication and Qualitative Research. A Handbook for Researching Online*, 1st ed., Thousand Oaks: SAGE.
- Manning, P. (2012) 'YouTube, 'drug videos' and drugs education', *Drugs: Education, Prevention and Policy*, 20(2), 120-130, available: <http://dx.doi.org/10.3109/09687637.2012.704435>.
- Marchant, A., Hawton, K., Stewart, A., Montgomery, P., Singaravelu, V., Lloyd, K., Purdy, N., Daine, K. and John, A. (2017) 'A systematic review of the relationship between internet use, self-harm and suicidal behaviour in young people: The good, the bad and the unknown', *PLoS One*, 12(8), e0181722, available: <http://dx.doi.org/10.1371/journal.pone.0181722>.
- Marino, C., Gini, G., Vieno, A. and Spada, M.M. (2018) 'The associations between problematic Facebook use, psychological distress and well-being among adolescents and young adults: A systematic review and meta-analysis', *J Affect Disord*, 226, 274-281, available: <http://dx.doi.org/10.1016/j.jad.2017.10.007>.
- Markham, A. and Buchanan, E. (2012) *Ethical Decision-Making and Internet Research: Recommendations from the AoIR working group*, Chicago, IL: AoIR.
- Markham, T. (2014) 'Celebrity advocacy and public engagement: The divergent uses of celebrity', *International Journal of Cultural Studies*, 18(4), 467-480, available: <http://dx.doi.org/10.1177/1367877914528542>.
- Markman, K.M. (2012) 'A Networked Self: Identity, Community and Culture on Social Network Sites', *New Media & Society*, 14(7), 1240-1242, available: <http://dx.doi.org/10.1177/1461444812453432>.
- Martin, C.A. and Bush, A.J. (2000) 'Do role models influence teenagers' purchase intentions and behavior?', *Journal of Consumer Marketing*, 17(5), 441-453, available: <http://dx.doi.org/10.1108/07363760010341081>.
- Marwick, A. (2015a) 'Instafame: Luxury Selfies in the Attention Economy', *Public Culture*, 27(1 75), 137-160, available: <http://dx.doi.org/10.1215/08992363-2798379>.
- Marwick, A. (2015b) 'You May Know Me from YouTube: (Micro-)Celebrity in Social Media' in Marshall, P. D. and Redmond, S., eds., *A Companion to Celebrity*, Hoboken: Wiley and Sons.
- Marwick, A. and boyd, d. (2011) 'To See and Be Seen: Celebrity Practice on Twitter', *Convergence*, 17(2), 139-158, available: <http://dx.doi.org/10.1177/1354856510394539>.
- Marwick, A. and boyd, d. (2014) 'It's just drama': teen perspectives on conflict and aggression in a networked era', *Journal of Youth Studies*, 17(9), 1187-1204, available: <http://dx.doi.org/10.1080/13676261.2014.901493>.
- Mason, M. (2010) 'Sample Size and Saturation in PhD Studies Using Qualitative Interviews', *Forum: Qualitative Social Research*, 11(3).

- Maxwell, J.A. (2013) *Qualitative Research Design: An interactive approach*, 3rd Edition ed., Thousand Oaks, CA: SAGE.
- Maxwell, J.A. and Loomis, D. (2003) 'Mixed Method Design: An Alternative Approach' in Tashakkori, A. and Teddlie, C., eds., *Handbook of Mixed Methods in Social and Behavioural Research*, Thousand Oaks: SAGE, 241-272.
- McCaslin, M.L. (2012) 'Pragmatism' in Given, L., ed., *The SAGE Encyclopedia of Qualitative Research Methods*, Thousand Oaks: SAGE.
- McCosker, A. (2017) *Networks of advocacy and peer influence: peer mentors in beyondblue's mental health forums*, Melbourne: Swinburne Social Innovation Research Institute.
- McCosker, A. (2018) 'Engaging mental health online: Insights from beyondblue's forum influencers', *New Media & Society*, 4748-4764, available: <http://dx.doi.org/10.1177/1461444818784303>.
- McCrae, N., Gettings, S. and Purssell, E. (2017) 'Social Media and Depressive Symptoms in Childhood and Adolescence: A Systematic Review', *Adolescent Research Review*, 2(4), 315-330, available: <http://dx.doi.org/10.1007/s40894-017-0053-4>.
- McDonald, I. (2018) 'Where does smoking fit into your school's PSHE curriculum?', *British Journal of School Nursing*, 13(5), 238-240.
- McKee, A., Albury, K., Burgess, J., Light, B., Osman, K. and Walsh, A. (2018) 'Locked down apps versus the social media ecology: Why do young people and educators disagree on the best delivery platform for digital sexual health entertainment education?', *New Media & Society*, 20(12), 4571-4589, available: <http://dx.doi.org/10.1177/1461444818778255>.
- McKenna, K.Y.A., Green, A.S. and Gleason, M.E.J. (2002) 'Relationship formation on the Internet. What's the big attraction?', *Journal of Social Issues*, 58(1), 9-31, available: <http://dx.doi.org/https://psycnet.apa.org/doi/10.1111/1540-4560.00246>.
- McLeroy, K., Bibeau, D., Steckler, A. and Glanz, K. (1988) 'An Ecological Perspective on Health Promotion Programs', *Health Education Quarterly*, 15(4), 351-377, available: <http://dx.doi.org/https://doi.org/10.1177%2F109019818801500401>.
- Mead, G.H. (1938) *The Philosophy of the Act*, Chicago: University of Chicago.
- Michie, S., van Stralen, M.M. and West, R. (2011) 'The behaviour change wheel: a new method for characterising and designing behaviour change interventions', *Implement Sci*, 6, 42, available: <http://dx.doi.org/10.1186/1748-5908-6-42>.
- Miles, S. (2000) *Youth Lifestyles in a Changing World*, Milton Keynes: Open University Press.
- Miller, D. (2016) *Social Media in an English Village*, London: UCL.

- Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, A. and Wang, X. (2016) *How the World Changed Social Media*, London: UCL.
- Mitchell, C. (2017) 'Technological Nonviolence and Girls. Creating a counter discourse', *Girlhood Studies*, 11, available: <http://dx.doi.org/10.3167/ghs.2017.100201>.
- Mitchell, W.A., Crawshaw, P., Bunton, R. and Green, E.E. (2001) 'Situating young people's experiences of risk and identity', *Health, Risk & Society*, 3(2), 217-233, available: <http://dx.doi.org/10.1080/13698570124548>.
- Moorhead, S.A., Hazlett, D.E., Harrison, L., Carroll, J.K., Irwin, A. and Hoving, C. (2013) 'A new dimension of health care: systematic review of the uses, benefits, and limitations of social media for health communication', *J Med Internet Res*, 15(4), e85, available: <http://dx.doi.org/10.2196/jmir.1933>.
- Moran-Ellis, J., Alexander, V.D., Cronin, A., Dickinson, M., Fielding, J., Sleney, J. and Thomas, H. (2006) 'Triangulation and integration: processes, claims and implications', *Qualitative Research*, 6(1), 45-59, available: <http://dx.doi.org/10.1177/1468794106058870>.
- Moreno, M.A. and Whitehill, J.M. (2014) 'Influence of Social Media on Alcohol Use in Adolescents and Young Adults', *Alcohol Research Current Reviews*, 38(1), 91-100.
- Morgan, A. and Haglund, B.J.A. (2009) 'Social capital does matter for adolescent health: evidence from the English HBSC study', *Health Promotion International*, 24(4), 363-372, available: <http://dx.doi.org/10.1093/heapro/dap028>.
- Morgan, D. (2013) *Intergrating Quantitative and Qualitative Methods*, Thousand Oaks: SAGE.
- Morgan, D.L. (1998) 'Practical Strategies for Combining Qualitative and Quantitative Methods: Applications to Health Research', *Qualitative Health Research*, 8(3), 362-376, available: <http://dx.doi.org/10.1177/104973239800800307>.
- Morgan, D.L. (2007) 'Paradigms Lost, Pragmatism Regained. Methodological Implications of Combining Qualitative and Quantitative Methods', *Journal of Mixed Methods Research*, 1(1), 48-76, available: <http://dx.doi.org/10.1177/2345678906292462>.
- Morgan, D.L. and Guevara, H. (2008) 'Rapport' in Given, L., ed., *The SAGE Encyclopedia of Qualitative Research Methods*, Thousand Oaks, California: SAGE.
- Morgan, M., Gibbs, S., Maxwell, K. and Britten, N. (2002) 'Hearing children's voices: methodological issues in conducting focus groups with children aged 7-11 years', *Qualitative Research*, 2(1), 5-20, available: <http://dx.doi.org/https://doi.org/10.1177%2F1468794102002001636>.
- Morse, J.M. (1991) 'Evaluating Qualitative Research', *Qualitative Health Research*, 1(3), 283-286, available: <http://dx.doi.org/10.1177/104973239100100301>.

- Naslund, J.A., Aschbrenner, K.A., Marsch, L.A. and Bartels, S.J. (2016) 'The future of mental health care: peer-to-peer support and social media', *Epidemiol Psychiatr Sci*, 1-10, available: <http://dx.doi.org/10.1017/S2045796015001067>.
- Nastasi, B.K., Hitchcock, J.H. and Brown, L.M. (2010) 'An Inclusive Framework for Conceptualizing Mixed Methods Design Typologies: Moving Toward Fully Integrated, Synergistic Research Models' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- National Society for the Protection of Children (NSPCC) (2012) *NSPCC Research Ethics Committee Guidance for Applicants*, London: NSPCC.
- Neiger, B.L., Thackeray, R., Van Wagenen, S.A., Hanson, C.L., West, J.H., Barnes, M.D. and Fagen, M.C. (2012) 'Use of social media in health promotion: purposes, key performance indicators, and evaluation metrics', *Health Promot Pract*, 13(2), 159-64, available: <http://dx.doi.org/10.1177/1524839911433467>.
- Neilsen (2009) *Global Faces and Networked Places. A Nielsen Report on Social Networking's New Global Footprint*, USA: Nielsen.
- Newman, M.W., Lauterbach, D., Munson, S.A., Resnick, P. and Morris, M.E. (2011) 'It's not that I don't have problems, I'm just not putting them on Facebook: challenges and opportunities in using online social networks for health', in *ACM Conference on Computer Supported Cooperative Work Pages*, Hangzhou, China, CSCW 2011.
- Newton, J. (2017) 'Introducing coping strategies to help young people look after their health now and in the future', *British Journal of School Nursing*, 12(9), 428-9.
- NHS Digital (2015) *What about YOUth? Survey 2014* [dataset].
- Nicholls, J. (2012) 'Everyday, everywhere: alcohol marketing and social media -current trends', *Alcohol Alcohol*, 47(4), 486-93, available: <http://dx.doi.org/10.1093/alcac/ags043>.
- Niglas, K. (2010) 'The Multidimensional Model of Research Methodology: An Integrated Set of Continua' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*.
- Noar, S.M. (2006) 'A 10-year retrospective of research in health mass media campaigns: where do we go from here?', *J Health Commun*, 11(1), 21-42, available: <http://dx.doi.org/10.1080/10810730500461059>.
- Nour, M., Yeung, S.H., Partridge, S. and Allman-Farinelli, M. (2017) 'A Narrative Review of Social Media and Game-Based Nutrition Interventions Targeted at Young Adults', *Journal of the Academy of Nutrition and Dietetics*, 117(5), 735-752.e10, available: <http://dx.doi.org/https://doi.org/10.1016/j.jand.2016.12.014>.
- Nutbeam, D. (1998) 'Health Promotion Glossary', *Health Promot Int*, 13(4), 349-364.

- Nutbeam, D. (2000) 'Health literacy as a public health goal: A challenge for contemporary health education and communication strategies in the 21st century', *Health Promot Int*, 15(3), 259-267.
- O'Cathain, A. (2010) 'Assessing the Quality of Mixed Methods Research: Towards a Comprehensive Framework' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- O'Cathain, A., Murphy, E. and Nicholl, J. (2007) 'Why, and how, mixed methods research is undertaken in health services research in England: a mixed methods study', *BMC Health Serv Res*, 7, 85, available: <http://dx.doi.org/10.1186/1472-6963-7-85>.
- O'Connor, H. and Madge, C. (2017) 'Online Interviewing' in Fielding, N. G., Raymond, M. L. and Blank, G., eds., *The SAGE Handbook of Online Research Methods*, Thousand Oaks, CA: SAGE.
- O'Donnell, N.H. and Willoughby, J.F. (2017) 'Photo-sharing social media for eHealth: analysing perceived message effectiveness of sexual health information on Instagram', *J Vis Commun Med*, 40(4), 149-159, available: <http://dx.doi.org/10.1080/17453054.2017.1384995>.
- Odendahl, T. and Shaw, A.M. (2011) 'Interviewing Elites' in Gubrium, J. F. and Holstein, J., eds., *Handbook of Interview Research*, Thousand Oaks, CA: SAGE.
- Ofcom (2016) *Children and parents: media use and attitudes report*, London: Ofcom.
- Ofcom (2019a) *Children and Parents Media Use and Attitudes 2018*, London: Ofcom.
- Ofcom (2019b) *Children and Parents Media Use and Attitudes Annex 1*, London: Ofcom.
- Office for National Statistics (2016) *Home internet and Social Media usage* [dataset].
- Office for National Statistics (2017) *Young people's well-being: 2017*, Cardiff: ONS.
- Office for National Statistics (2019) *Internet Access - Households and Individuals* [dataset], [accessed 12/03/2019].
- Oh, S. (2012) 'The characteristics and motivations of health answerers for sharing information, knowledge, and experiences in online environments', *Journal of the American Society for Information Science and Technology*, 63(3), 543-557, available: <http://dx.doi.org/10.1002/asi.21676>.
- Olsen, R. (2008) 'Self-Selection Bias' in Lavrakas, P., ed., *Encyclopedia of Survey Research Methods*, New York: SAGE.
- Onwuegbuzie, A.J. and Combs, J.P. (2010) 'Emergent Data Analysis Techniques in Mixed Methods Research: A Synthesis' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.

- Onwuegbuzie, A.J. and Johnson, R.B. (2006) 'The Validity Issue in Mixed Research', *Research in the Schools*, 13(1), 48-63.
- Onwuegbuzie, A.J. and Leech, N.L. (2005) 'On Becoming a Pragmatic Researcher: The Importance of Combining Quantitative and Qualitative Research Methodologies', *International Journal of Social Research Methodology*, 8(5), 375-387, available: <http://dx.doi.org/10.1080/13645570500402447>.
- Orben, A. and Przybylski, A.K. (2019) 'The association between adolescent well-being and digital technology use', *Nature Human Behaviour*, 3, 173-182, available: <http://dx.doi.org/https://doi.org/10.1038/s41562-018-0506-1>.
- Padgett, D. (2012) *Qualitative and Mixed Methods in Public Health*, Thousand Oaks, CA: SAGE.
- Paek, H.J., Hove, T. and Jeon, J. (2013) 'Social media for message testing: a multilevel approach to linking favorable viewer responses with message, producer, and viewer influence on YouTube', *Health Commun*, 28(3), 226-36, available: <http://dx.doi.org/10.1080/10410236.2012.672912>.
- Paek, H.J., Kim, S., Hove, T. and Huh, J.Y. (2014) 'Reduced harm or another gateway to smoking? source, message, and information characteristics of E-cigarette videos on YouTube', *J Health Commun*, 19(5), 545-60, available: <http://dx.doi.org/10.1080/10810730.2013.821560>.
- Papacharissi, Z. and Rubin, A.M. (2000) 'Predictors of Internet Use', *Journal of Broadcasting & Electronic Media*, 44(2), 175-196, available: http://dx.doi.org/10.1207/s15506878jobem4402_2.
- Park, B.K. and Calamaro, C. (2013) 'A systematic review of social networking sites: innovative platforms for health research targeting adolescents and young adults', *J Nurs Scholarsh*, 45(3), 256-64, available: <http://dx.doi.org/10.1111/jnu.12032>.
- Patel, R., Chang, T., Greysen, S.R. and Chopra, V. (2015) 'Social Media Use in Chronic Disease: A Systematic Review and Novel Taxonomy', *Am J Med*, 128(12), 1335-50, available: <http://dx.doi.org/10.1016/j.amjmed.2015.06.015>.
- Paulus, T., Lester, J. and Rasanen, P. (2014) *Digital Tools for Qualitative Research*, London: SAGE.
- Pempek, T.A., Yermolayeva, Y.A. and Calvert, S.L. (2009) 'College students' social networking experiences on Facebook', *Journal of Applied Developmental Psychology*, 30(3), 227-238, available: <http://dx.doi.org/10.1016/j.appdev.2008.12.010>.
- Perloff, R.M. (2014) 'Social Media Effects on Young Women's Body Image Concerns: Theoretical Perspectives and an Agenda for Research', *Sex Roles*, 71(11-12), 363-377, available: <http://dx.doi.org/10.1007/s11199-014-0384-6>.
- Piaget, J. (1964) 'Part I: Cognitive development in children: Piaget development and learning', *Journal of Research in Science Teaching*, 2(3), 176-186, available: <http://dx.doi.org/10.1002/tea.3660020306>.
- Pink, S. (2007) *Doing Visual Ethnography*, London: SAGE.

- Plano Clark, V.L. and Badiee, M. (2010) 'Research Questions in Mixed Methods Research' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks: SAGE.
- Porcellato, L., Dughill, L. and Springett, J. (2002) 'Using focus groups to explore children's perceptions of smoking: reflections on practice', *Health Education*, 102(6), 310-320, available: <http://dx.doi.org/https://doi.org/10.1108/09654280210446856>.
- Powers, R.M. (2015) 'How does she afford all that?: Rumors, Anonymity, and the darkside of being a YouTube microcelebrity', in *The 16th Annual Meeting of the Association of Internet Researchers*, Phoenix, AZ.
- Primack, B.A., Colditz, J.B., Pang, K.C. and Jackson, K.M. (2015) 'Portrayal of alcohol intoxication on YouTube', *Alcohol Clin Exp Res*, 39(3), 496-503, available: <http://dx.doi.org/10.1111/acer.12640>.
- Prinstein, M.J. and Dodge, K.A. (2008) *Understanding Peer Influence in Children and Adolescents*, New York: Guilford Press.
- Public Health England (2016) *Rise Above - Campaign Resource Centre*, available: <https://campaignresources.phe.gov.uk/schools/topics/rise-above/about-rise-above> [accessed 21/11/2018].
- Public Health England (2017) *PHE launches Rise Above for Schools programme* [press release], 21/11/2018, available: <https://www.gov.uk/government/news/phe-launches-rise-above-for-schools-programme> [accessed 21/11/2018].
- QSR (2012) *Caputre from YouTube*, available: http://help-ncapture.qsrinternational.com/desktop/topics/capture_from_youtube.htm [accessed 03/09/2018].
- QSR International (2015) *NVivo qualitative data analysis software. Version 11*: QSR International Pty Ltd.
- Randolph, W. and Viswanath, K. (2004) 'Lessons learned from public health mass media campaigns: marketing health in a crowded media world', *Annu Rev Public Health*, 25, 419-37, available: <http://dx.doi.org/10.1146/annurev.publhealth.25.101802.123046>.
- Reason, P. (1994) 'Three approaches participative inquiry' in Denzin, N. K. and Lincoln, Y. S., eds., *Handbook of qualitative research*, Thousand Oaks: SAGE, 324-339.
- Reilly, P. (2014) 'The 'Battle of Stokes Croft' on YouTube: The Development of an Ethical Stance for the Study of Online Comments', *SAGE Research Methods Cases*, available: <http://dx.doi.org/10.4135/978144627305013509209>.
- Reisdorf, B.C. and Groselj, D. (2017) 'Internet (non-)use types and motivational access: Implications for digital inequalities research', *New Media & Society*, 19(8), 1157-1176, available: <http://dx.doi.org/10.1177/1461444815621539>.

- Rhodes, J. (2004) *Stand by Me: The Risks and Rewards of Mentoring Today's Youth.*, London: Harvard University Press.
- Rice, S.M., Goodall, J., Hetrick, S.E., Parker, A.G., Gilbertson, T., Amminger, G.P., Davey, C.G., McGorry, P.D., Gleeson, J. and Alvarez-Jimenez, M. (2014) 'Online and social networking interventions for the treatment of depression in young people: a systematic review', *Journal of medical Internet research*, 16(9), e206-e206, available: <http://dx.doi.org/10.2196/jmir.3304>.
- Rickwood, D.J., Deane, F.P. and Wilson, C.J. (2007) 'When and how do young people seek professional help for mental health problems?', *MJA*, 187(7), 35-39.
- Ridout, B. and Campbell, A. (2018) 'The Use of Social Networking Sites in Mental Health Interventions for Young People: Systematic Review', *Journal of medical Internet research*, 20(12), e12244-e12244, available: <http://dx.doi.org/10.2196/12244>.
- Ringrose, J., Gill, R., Livingstone, S. and Harvey, L. (2012) *A Qualitative Study of Children, Young People and Sexting*, London: NSPCC.
- Robards, B. (2010) 'Randoms in my bedroom: Negotiating privacy and unsolicited contact on social network sites', *PRism*, 7(3), 1-12.
- Robards, B. and Bennett, A. (2011) 'MyTribe: Post-subcultural Manifestations of Belonging on Social Network Sites', *Sociology*, 45(2), 303-317, available: <http://dx.doi.org/doi:10.1177/0038038510394025>.
- Robards, B. and Lincoln, S. (2016) 'Making It "Facebook Official": Reflecting on Romantic Relationships Through Sustained Facebook Use', *Social Media + Society*, 2(4), available: <http://dx.doi.org/10.1177/2056305116672890>.
- Robinson, M.N., Tansil, K.A., Elder, R.W., Soler, R.E., Labre, M.P., Mercer, S.L., Eroglu, D., Baur, C., Lyon-Daniel, K., Fridinger, F., Sokler, L.A., Green, L.W., Miller, T., Dearing, J.W., Evans, W.D., Snyder, L.B., Kasisomayajula Viswanath, K., Beistle, D.M., Chervin, D.D., Bernhardt, J.M., Rimer, B.K. and Community Preventive Services Task, F. (2014) 'Mass media health communication campaigns combined with health-related product distribution: a community guide systematic review', *Am J Prev Med*, 47(3), 360-71, available: <http://dx.doi.org/10.1016/j.amepre.2014.05.034>.
- Rogers, E.M. (2003) *Diffusion of Innovations*, 5 ed., New York: Free Press.
- Rogers, E.M. and Storey, J.D. (1987) 'Communication campaigns' in *Handbook of communication science.*, Thousand Oaks, CA, US: SAGE Publications, 817-846.
- Rojek, C. (2017) 'The case of Belle Gibson, social media, and what it means for understanding leisure under digital praxis', *Annals of Leisure Research*, 20(5), 524-528, available: <http://dx.doi.org/10.1080/11745398.2017.1290142>.
- Rose, T., Barker, M., Maria Jacob, C., Morrison, L., Lawrence, W., Strömmer, S., Vogel, C., Woods-Townsend, K., Farrell, D., Inskip, H. and Baird, J. (2017) 'A Systematic Review of Digital Interventions for Improving the Diet and Physical Activity Behaviors of Adolescents', *Journal of*

Adolescent Health, 61(6), 669-677, available:
<http://dx.doi.org/https://doi.org/10.1016/j.jadohealth.2017.05.024>.

Rosman, K. (2017) 'Netflix Triggers Online Debate With a Show About Teen Suicide, '13 Reasons Why'', *NY Times*, 19/04/2017, available: https://www.nytimes.com/2017/04/19/style/13-reasons-why-netflix-teen-suicide.html?_r=0 [accessed 21/11/2018].

Royal College of Paediatrics and Child Health, (RCPCH) (2011) *Involving children and young people in health services*, London: RCPCH.

Rudd, R.E. (2015) 'The evolving concept of health literacy new directions for health literacy studies.', *Journal of Communication in Health Care*, 8(1), 7-9, available:
<http://dx.doi.org/https://doi.org/10.1179/1753806815Z.000000000105>.

Ruppel, E.K. and Rains, S.A. (2012) 'Information Sources and the Health Information-Seeking Process: An Application and Extension of Channel Complementarity Theory', *Communication Monographs*, 79(3), 385-405, available: <http://dx.doi.org/10.1080/03637751.2012.697627>.

Salmons, J. (2015) *Qualitative Online Interviews. Strategies, Design, and Skills*, 2nd ed., Thousand Oaks, CA: SAGE.

Sampson, M., Cumber, J., Li, C., Pound, C.M., Fuller, A. and Harrison, D. (2013) 'A systematic review of methods for studying consumer health YouTube videos, with implications for systematic reviews', *PeerJ*, 1, e147, available: <http://dx.doi.org/10.7717/peerj.147>.

Sandelowski, M. (2000) 'Combining Qualitative and Quantitative Sampling, Data Collection, and Analysis Techniques in Mixed-Method Studies', *Research in Nursing & Health*, 23(3), 246-255, available:
[http://dx.doi.org/10.1002/1098-240x\(200006\)23:3<246::Aid-nur9>3.0.Co;2-h](http://dx.doi.org/10.1002/1098-240x(200006)23:3<246::Aid-nur9>3.0.Co;2-h).

Scalvini, M. and Rigamonti, F. (2018) '3-and-a-half reasons why a TV show does not result in an increase in suicide attempts and ideation', *Parenting for a Digital Future*, 21/11/2018, available:
<http://blogs.lse.ac.uk/parenting4digitalfuture/2018/06/13/3-and-a-half-reasons-why/>
[accessed 21/11/2018].

Scobie, W. (2011) 'An Anthropological Introduction to YouTube. Michael Wesch', *American Anthropologist*, 113(4), 661-662, available: <http://dx.doi.org/10.1111/j.1548-1433.2011.01380.x>.

Seabrook, E.M., Kern, M.L. and Rickard, N.S. (2016) 'Social Networking Sites, Depression, and Anxiety: A Systematic Review', *JMIR Ment Health*, 3(4), e50, available:
<http://dx.doi.org/10.2196/mental.5842>.

Senft, T.M. (2008) *Camgirls: Celebrity and Community in the Age of Social Networks*, Oxford: Peter Lang Publishing.

Shaw, J.M., Mitchell, C.A., Welch, A.J. and Williamson, M.J. (2015) 'Social media used as a health intervention in adolescent health: A systematic review of the literature', *Digit Health*, 1, 1-10, available: <http://dx.doi.org/10.1177/2055207615588395>.

- Sheffield, E. (2014) 'Zoella - Queen of the Haul', *Vogue*(November 2014), available: <https://www.vogue.co.uk/article/zoella-full-interview-vogue-november-2014-issue> [accessed 21/11/2018].
- Shenton, A.K. (2004) 'Strategies for ensuring trustworthiness in qualitative research projects', *Education for Information*, 22, 63–75.
- Shin, W. and Lwin, M.O. (2017) 'How does “talking about the Internet with others” affect teenagers’ experience of online risks? The role of active mediation by parents, peers, and school teachers', *New Media & Society*, 19(7), 1109-1126, available: <http://dx.doi.org/10.1177/1461444815626612>.
- Sisask, M. and Varnik, A. (2012) 'Media roles in suicide prevention: a systematic review', *Int J Environ Res Public Health*, 9(1), 123-38, available: <http://dx.doi.org/10.3390/ijerph9010123>.
- Skinner, H., Biscope, S., Poland, B. and Goldberg, E. (2003) 'How adolescents use technology for health information: implications for health professionals from focus group studies', *J Med Internet Res*, 5(4), e32, available: <http://dx.doi.org/10.2196/jmir.5.4.e32>.
- Smailhodzic, E., Hooijsma, W., Boonstra, A. and Langley, D.J. (2016) 'Social media use in healthcare: A systematic review of effects on patients and on their relationship with healthcare professionals', *BMC Health Serv Res*, 16, 442, available: <http://dx.doi.org/10.1186/s12913-016-1691-0>.
- Smith, B. and McGannon, K.R. (2018) 'Developing rigor in qualitative research: problems and opportunities within sport and exercise psychology', *International Review of Sport and Exercise Psychology*, 11(1), 101-121, available: <http://dx.doi.org/10.1080/1750984X.2017.1317357>.
- Snelson, C. (2014) 'What YouTube Vloggers Have to Say about School: A Mixed-Methods Ethnography' in *SAGE Research Methods Cases*, London: SAGE.
- Social Blade (2017) *Top 250 YouTubers in UK*, available: <https://socialblade.com/youtube/top/country/gb> [accessed 12/03/2018].
- Social Blade (2019) *Top 250 YouTubers in the UK*, available: <https://socialblade.com/> [accessed 12/03/2019].
- Sorensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., Brand, H. and Consortium Health Literacy Project, E. (2012) 'Health literacy and public health: a systematic review and integration of definitions and models', *BMC Public Health*, 12, 80, available: <http://dx.doi.org/10.1186/1471-2458-12-80>.
- Spencer, G. (2014) 'Young people and health: Towards a new conceptual framework for understanding empowerment', *Health*, 18(1), 3-22, available: <http://dx.doi.org/10.1177/1363459312473616>.
- Stafford, N. (2017) 'German doctors condemn internet TV series depicting teenage suicide', *BMJ*, 358, available: <http://dx.doi.org/> DOI:10.1136/bmj.j3367.

- Stead, M., McDermott, L., MacKintosh, A.M. and Adamson, A. (2011) 'Why healthy eating is bad for young people's health: Identity, belonging and food', *Social Science & Medicine*, 72(7), 1131-1139, available: <http://dx.doi.org/http://dx.doi.org/10.1016/j.socscimed.2010.12.029>.
- Stephen, D.E. and Squires, P.A. (2003) 'Adults Don't Realize How Sheltered They Are'. A Contribution to the Debate on Youth Transitions from Some Voices on the Margins', *Journal of Youth Studies*, 6(2), 145-164, available: <http://dx.doi.org/10.1080/1367626032000110282>.
- Stieglitz, S. and Dang-Xuan, L. (2014) 'Emotions and Information Diffusion in Social Media—Sentiment of Microblogs and Sharing Behavior', *Journal of Management Information Systems*, 29(4), 217-248, available: <http://dx.doi.org/10.2753/mis0742-1222290408>.
- Strange, V., Forest, S., Oakley, A. and Ripple Study Team (2003) 'Using research questionnaires with young people in schools: the influence of the social context', *International Journal of Social Research Methodology*, 6(4), 337-346, available: <http://dx.doi.org/10.1080/1364557021000024749>.
- Suzuki, L.K. and Calzo, J.P. (2004) 'The search for peer advice in cyberspace: An examination of online teen bulletin boards about health and sexuality', *Journal of Applied Developmental Psychology*, 25(6), 685-698, available: <http://dx.doi.org/10.1016/j.appdev.2004.09.002>.
- Svenningson-Elm, M. (2009) 'How Do Various Notions of Privacy Influence Decisions in Qualitative Internet Research?' in Markham, A. and Baym, N., eds., *Internet Inquiry. Conversations about Method*, Thousand Oaks: SAGE.
- Syed-Abdul, S., Fernandez-Luque, L., Jian, W.S., Li, Y.C., Crain, S., Hsu, M.H., Wang, Y.C., Khandregzen, D., Chuluunbaatar, E., Nguyen, P.A. and Liou, D.M. (2013) 'Misleading health-related information promoted through video-based social media: anorexia on YouTube', *J Med Internet Res*, 15(2), e30, available: <http://dx.doi.org/10.2196/jmir.2237>.
- Tan, L., Ng, S.H., Omar, A. and Karupaiah, T. (2018) 'What's on YouTube? A Case Study on Food and Beverage Advertising in Videos Targeted at Children on Social Media', *Child Obes*, 14(5), 280-290, available: <http://dx.doi.org/10.1089/chi.2018.0037>.
- Tashakkori, A. and Teddlie, C. (1998) 'Mixed Methodology: Combining Qualitative and Quantitative Approaches' in, Thousand Oaks: SAGE.
- Tashakkori, A. and Teddlie, C. (2003) *Handbook of Mixed Methods in Social and Behavioural Research*, Thousand Oaks: SAGE.
- Tashakkori, A. and Teddlie, C. (2010) *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, Thousand Oaks, CA: SAGE.
- Teddlie, C. and Tashakkori, A. (2009) *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioural Sciences*, London: SAGE.

- Teddlie, C. and Tashakkori, A. (2010) 'Overview of Contemporary Issues in Mixed methods Research' in Tashakkori, A. and Teddlie, C., eds., *SAGE Handbook of Mixed Methods in Social & Behavioural Research*, Thousand Oaks: SAGE.
- Thackeray, R., Neiger, B.L., Smith, A.K. and Van Wagenen, S.B. (2012) 'Adoption and use of social media among public health departments', *BMC Public Health*, 12, 242, available: <http://dx.doi.org/10.1186/1471-2458-12-242>.
- Tigges, B.B. (2003) 'Parental Consent and Adolescent Risk Behaviour Research', *Journal of Nursing Scholarship*, 35(3), 283-289, available: <http://dx.doi.org/https://doi.org/10.1111/j.1547-5069.2003.00283.x>.
- Till, Y. and Matei, A. (2016) 'Basics of Sampling for Survey Research' in Wolf, C., Joye, D., Smith, T. and Fu, Y.-c., eds., *The SAGE Handbook of Survey Methodology*, New York: SAGE.
- Turner, G. (2004) *Understanding Celebrity*, Thousand Oaks: SAGE Publications.
- Uhls, Y.T. and Greenfield, P.M. (2012) 'The value of fame: preadolescent perceptions of popular media and their relationship to future aspirations', *Dev Psychol*, 48(2), 315-26, available: <http://dx.doi.org/10.1037/a0026369>.
- Valente, T.W. and Pumpuang, P. (2007) 'Identifying opinion leaders to promote behavior change', *Health Educ Behav*, 34(6), 881-96, available: <http://dx.doi.org/10.1177/1090198106297855>.
- Valentine, G. (2015) 'Being Seen and Heard? The Ethical Complexities of Working with Children and Young People at Home and at School', *Ethics, Place & Environment*, 2(2), 141-155, available: <http://dx.doi.org/10.1080/1366879x.1999.11644243>.
- Välimäki, M., Athanasopoulou, C., Lahti, M. and Adams, C.E. (2016) 'Effectiveness of Social Media Interventions for People With Schizophrenia: A Systematic Review and Meta-Analysis', *Journal of medical Internet research*, 18(4), e92-e92, available: <http://dx.doi.org/10.2196/jmir.5385>.
- Valkenburg, P.M. (2004) *Children's Responses to the Screen. A media psychological approach*, Mahwah, New Jersey: LEA Publishers.
- van Deursen, A.J.A.M. and van Dijk, J.A.G.M. (2014) 'The digital divide shifts to differences in usage', *New Media & Society*, 16(3), 507-526, available: <http://dx.doi.org/10.1177/1461444813487959>.
- Van Dijck, J. (2013) *The Culture of Connectivity: A Critical History of Social Media*, Oxford: Oxford University Press.
- Vasileiou, K., Barnett, J., Thorpe, S. and Young, T. (2018) 'Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period', *BMC Medical Research Methodology*, 18(1), 148, available: <http://dx.doi.org/10.1186/s12874-018-0594-7>.

- Vaterlaus, J.M., Patten, E.V., Roche, C. and Young, J.A. (2015) '#Gettinghealthy: The perceived influence of social media on young adult health behaviors', *Computers in Human Behavior*, 45, 151-157, available: <http://dx.doi.org/10.1016/j.chb.2014.12.013>.
- Wakefield, M.A., Loken, B. and Hornik, R.C. (2010) 'Use of mass media campaigns to change health behaviour', *The Lancet*, 376(9748), 1261-1271, available: [http://dx.doi.org/10.1016/s0140-6736\(10\)60809-4](http://dx.doi.org/10.1016/s0140-6736(10)60809-4).
- Weiser, E.B. (2000) 'Gender differences in internet use patterns and Internet application preferences: A two-sample comparison', *CyberPsychology & Behavior*, 3(2), 167-178, available: <http://dx.doi.org/Doi 10.1089/109493100316012>.
- Wen, N., Chia, S.C. and Hao, X. (2015) 'What Do Social Media Say About Makeovers? A Content Analysis of Cosmetic Surgery Videos and Viewers' Responses on YouTube', *Health Commun*, 30(9), 933-42, available: <http://dx.doi.org/10.1080/10410236.2014.913220>.
- Wendler, M.C. (2001) 'Triangulation using a meta-matrix', *Journal of Advanced Nursing*, 35(4), 521-525, available: <http://dx.doi.org/10.1046/j.1365-2648.2001.01869.x>.
- Wesch, M. (2008) 'An anthropological Introduction to YouTube'.
- White, M. and Dorman, S.M. (2001) 'Receiving social support online: implications for health education', *Health Education Research*, 16(6), 693-707, available: <http://dx.doi.org/https://doi.org/10.1093/her/16.6.693>.
- Wicks, P., Keininger, D.L., Massagli, M.P., de la Loge, C., Brownstein, C., Isojarvi, J. and Heywood, J. (2012) 'Perceived benefits of sharing health data between people with epilepsy on an online platform', *Epilepsy Behav*, 23(1), 16-23, available: <http://dx.doi.org/10.1016/j.yebeh.2011.09.026>.
- Wilkerson, J.M., Iantaffi, A., Grey, J.A., Bockting, W.O. and Rosser, B.R.S. (2014) 'Recommendations for internet-based qualitative health research with hard-to-reach populations', *Qualitative Health Research*, 24(4), 561-574, available: <http://dx.doi.org/10.1177/1049732314524635>.
- Williams, D., Sullivan, S.J., Schneiders, A.G., Ahmed, O.H., Lee, H., Balasundaram, A.P. and McCrory, P.R. (2014) 'Big hits on the small screen: an evaluation of concussion-related videos on YouTube', *Br J Sports Med*, 48(2), 107-11, available: <http://dx.doi.org/10.1136/bjsports-2012-091853>.
- Williams, G., Hamm, M.P., Shulhan, J., Vandermeer, B. and Hartling, L. (2014) 'Social media interventions for diet and exercise behaviours: a systematic review and meta-analysis of randomised controlled trials', *BMJ Open*, 4(2), e003926, available: <http://dx.doi.org/10.1136/bmjopen-2013-003926>.
- Winpenny, E.M., Marteau, T.M. and Nolte, E. (2014) 'Exposure of children and adolescents to alcohol marketing on social media websites', *Alcohol Alcohol*, 49(2), 154-9, available: <http://dx.doi.org/10.1093/alcalc/agt174>.
- Wittgenstein, L. (1953) *Philosophical Investigations*, Cambridge: Cambridge University Press.

- Wong, V.S., Stevenson, M. and Selwa, L. (2013) 'The presentation of seizures and epilepsy in YouTube videos', *Epilepsy Behav*, 27(1), 247-50, available: <http://dx.doi.org/10.1016/j.yebeh.2013.01.017>.
- World Health Organisation (1986) *Young People's Health - a challenge for society*. , Geneva: WHO.
- World Health Organisation (2004) *Young people's health in context*, Geneva: WHO.
- Yan, Z., Wang, T., Chen, Y. and Zhang, H. (2016) 'Knowledge sharing in online health communities: A social exchange theory perspective', *Information & Management*, 53(5), 643-653, available: <http://dx.doi.org/10.1016/j.im.2016.02.001>.
- Yancey, A.K., Grant, D., Kurosky, S., Kravitz-Wirtz, N. and Mistry, R. (2011) 'Role Modeling, Risk, and Resilience in California Adolescents', *Journal of Adolescent Health*, 48(1), 36-43, available: <http://dx.doi.org/https://doi.org/10.1016/j.jadohealth.2010.05.001>.
- YMCA. (2016) *What Matters Most*. , London: YMCA.
- Yonker, L.M., Zan, S., Scirica, C.V., Jethwani, K. and Kinane, T.B. (2015) "'Friending" teens: systematic review of social media in adolescent and young adult health care', *J Med Internet Res*, 17(1), e4, available: <http://dx.doi.org//jmir.3692>.
- Yoo, J.H. and Kim, J. (2012) 'Obesity in the new media: a content analysis of obesity videos on YouTube', *Health Commun*, 27(1), 86-97, available: <http://dx.doi.org/10.1080/10410236.2011.569003>.
- YouTube (2016) *Paid Product Placements and Endorsements*, available: <https://support.google.com/youtube/answer/154235?hl=en-GB> [accessed 21/11/2018].
- YouTube (2018) *YouTube in Numbers*, available: <https://www.youtube.com/intl/en-GB/yt/about/press/> [accessed 02/05/2019].
- YouTube (2019) *Rise Above YouTube Channel*, available: <https://www.youtube.com/user/riseabovechannel/featured> [accessed 09/03/2019].
- Ziebland, S. and Wyke, S. (2012) 'Health and Illness in a Connected World: How Might Sharing Experiences on the Internet Affect People's Health?', *Millbank Quarterly*, 2, 219-249.

Appendix A: Questionnaire opt-out letter for parents/guardians



**Public Health Institute
Liverpool John Moores
University
Henry Cotton building
15-21 Webster Street
L3 2ET**

Project title: Examining the role professional YouTubers play in young people's health identity and behaviour in the UK

Dear parent(s)/guardian(s),

The Public Health Institute (www.cph.org.uk), Liverpool John Moore's University (LJMU) has a national reputation for carrying out research aimed at improving the health and wellbeing of young people. We are currently carrying out a PhD study exploring the health information that young people (13-18 years) encounter on YouTube and the way in which this information influences their own health behaviours. The results from this study will help us understand the role of YouTubers in shaping young people's attitudes towards health messages and help inform new approaches and guidelines to address young people's health. It is important for us to gain the views of a wide variety of young people, whether they watch YouTube videos or not. Further details of the study and a consent form are enclosed.

Your child's school has kindly agreed to participate in this study, which will be conducted between January and March 2017. This study will involve a 20 minute questionnaire which will be completed in the classroom during school hours. Young people will be asked questions regarding their use of social media, their opinions on the health messages they encounter on YouTube and their seeking of health information online. **All responses to the questionnaire will be anonymous and treated as confidential and the school and your child will not be named in any of the research findings.**

If you would prefer that your child did not take part in the study, please complete and return the form below to your child's school. If the form is not returned your child will automatically be invited to participate in the study. However, they will still have the chance to withdraw from the study on the day of the survey.

If you have any questions regarding the research please contact Jane Harris
j.harris1@ljmu.ac.uk or call 0151 231 4542 during office hours.

Best wishes,



Jane Harris
PhD Student
Liverpool John Moores University
University Public Health Institute



Dr Lorna Porcellato
Reader
Liverpool John Moores
Public Health Institute

I would prefer that my child _____ is not involved in the above study.

Please tick this box if your child **does not** have capacity to consent to participate in the survey

Form room/form teacher: _____

Signed:

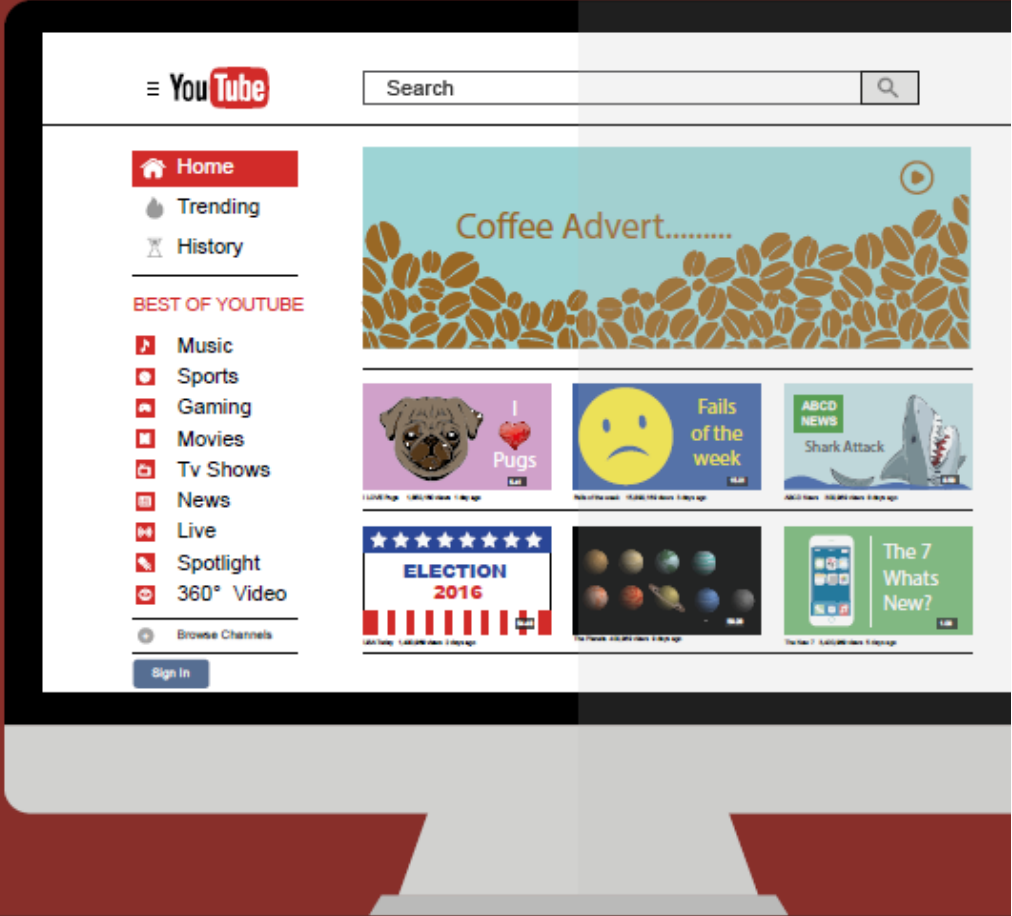
Full name:

Date: _____

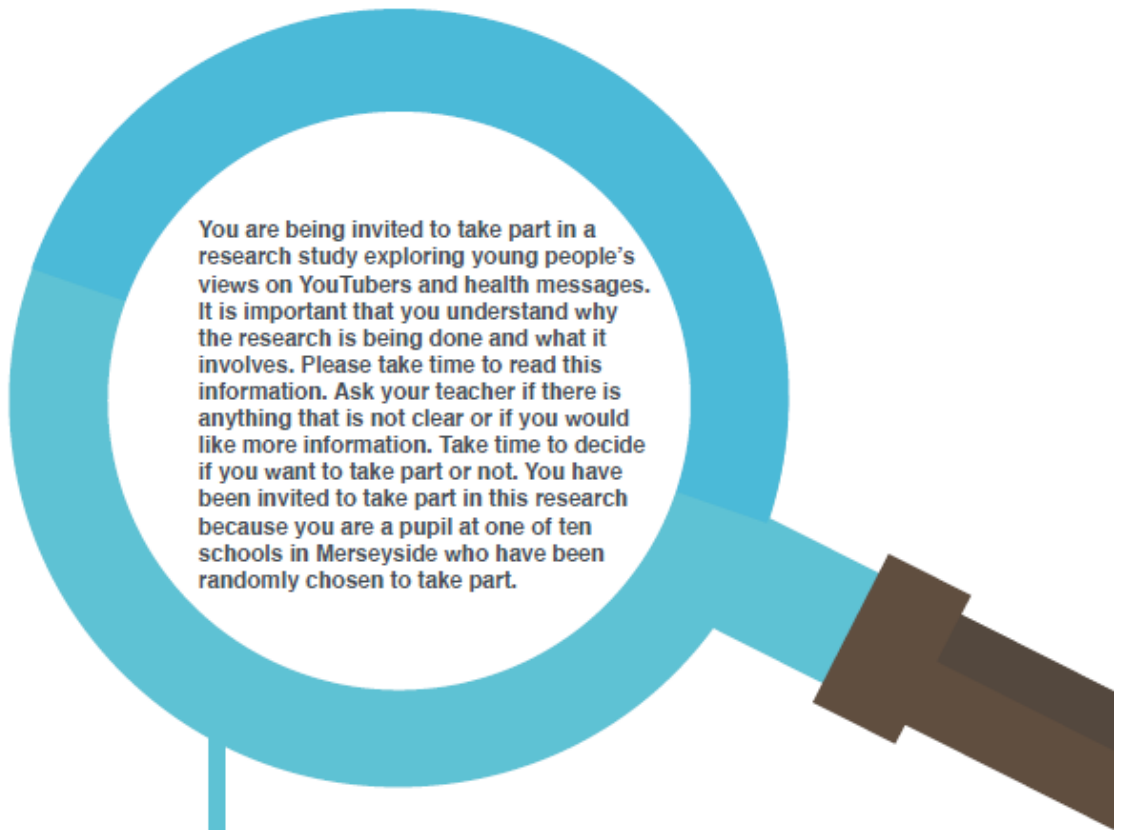
Appendix B: School questionnaire and participant information sheet

LIVERPOOL JOHN MOORES UNIVERSITY

PHI Public Health Institute
LIVERPOOL JOHN MOORES UNIVERSITY



Examining the role professional YouTubers play in young people's health identity and behaviour in the UK



You are being invited to take part in a research study exploring young people's views on YouTubers and health messages. It is important that you understand why the research is being done and what it involves. Please take time to read this information. Ask your teacher if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not. You have been invited to take part in this research because you are a pupil at one of ten schools in Merseyside who have been randomly chosen to take part.

1. Do I have to take part?
No. It is up to you to decide whether or not to take part. You can stop at any time without giving a reason.

2. What will happen to me if I take part?
If you decide to take part, please complete the questionnaire in this booklet. There are no right or wrong answers and you do not have to answer any questions that you do not want to. The questionnaire should take around 20 minutes to complete.

4. Will my taking part in the study be kept confidential?
We promise anything that you say to us will remain confidential. Nobody apart from the researcher will see what you have written. Please remember that because the survey doesn't ask you for your name it might not be possible to decide you do not want us to include your answers once you have handed back the questionnaire.

3. Are there any risks / benefits involved?
There are no direct risks or benefits to taking part/not taking part. This means that nothing good/bad will happen if you decide you do or don't want to take part. Please remember that if you tell us that you intend to hurt yourself or someone else we will need to report this to your school.

What do I do next?

If you do not wish to take part in the research then you can tell your teacher that you do not want to complete the questionnaire or you can simply hand in a blank questionnaire.

If you decide that you do wish to take part in the research, you should fill in the questionnaire on the next page.

If you have any questions or want more information you can ask your teacher or you can contact the researcher yourself:

Contact Details of Researcher:



Jane Harris,
Public Health Institute
Henry Cotton Campus
Liverpool John Moores University
15-21 Webster Street
Liverpool
L3 2ET



0151 231 4506



j.harris1@2016.ljmu.ac.uk

Thank you for reading this information

This study has received ethical approval from LJMU's Research Ethics Committee (Ref: 16/PBH/09)



Section 1: About you

1. Are you:

- Male
- Female
- Prefer not to say

2. How old are you?

- Under 13
- 13
- 14
- 15
- 16
- 17
- 18
- Over 18

3. How would you describe your ethnicity?

- White
- Arab
- Black African/ Caribbean Black British
- Chinese
- Asian/Asian British
- Mixed/multiple groups
- Other

4. How is your health in general? Would you say it was...?

- Very Good
- Good
- Fair
- Bad
- Very Bad
- Don't Know

5. Below are some statements about feelings and thoughts.

On each row, please tick the box that best describes your experience of each over the last 2 weeks.

	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future					
I've been feeling useful					
I've been feeling relaxed					
I've been feeling interested in other people					
I've had energy to spare					
I've been dealing with problems well					
I've been thinking clearly					
I've been feeling good about myself					
I've been feeling close to other people					
I've been feeling confident					
I've been able to make up my own mind about things					
I've been feeling loved					
I've been interested in new things					
I've been feeling cheerful					

Section 2: Social Media



6. Do you use any of the following social media (please tick all that apply)?

Facebook Instagram Kik

Snapchat Tumblr Twitter

Vine Whatsapp Youtube

Other (please specify) _____

7. How do you access social media? (please tick all that apply)

Smartphone Tablet / iPad ipod

Laptop Desktop computer Games Console

Kindle / e-reader

8. How often have you used any social media in the past 3 months?

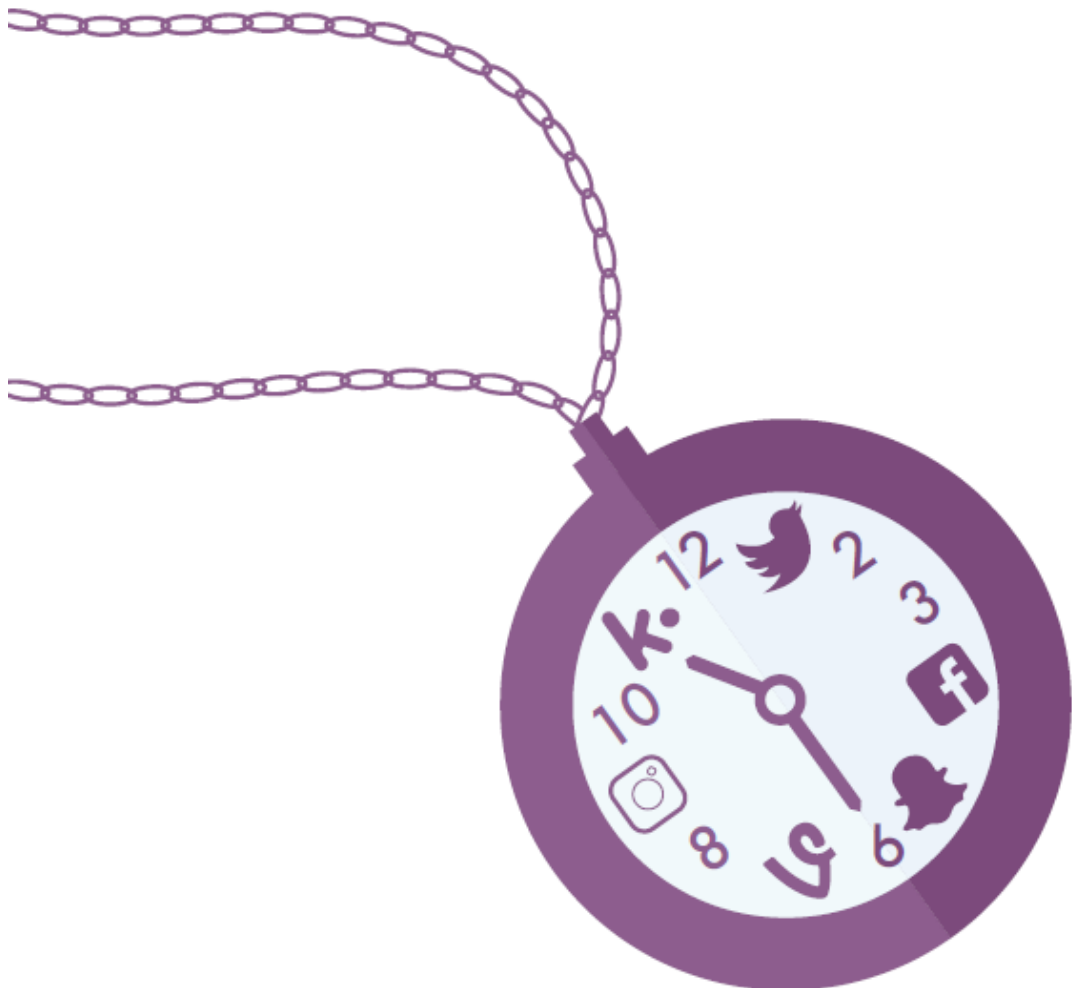
Daily or almost every day 2-3 times a week Weekly


Less than once a week Monthly Never used

9. How much time have you spent on social media in the past 24 hours (so from this time yesterday until now)?

Less than one hour 1-2 hours 3-4 hours

5-6 hours More than 6 hours Not used





Section 3: YouTube

10. Have you ever watched videos on YouTube?

Yes

No

Don't Know

If you answered "no" please go to question 10a

If you answered "yes" or "don't know" please go to question 11

10a. Why don't you watch YouTube? Please write any reasons in the box below

The instructions below are only for people answering question 10a.

Thank you for completing this survey. We do not need any more information from you. Please turn to the back page for instructions on handing in your survey.

11. Have you used YouTube to...? (tick all that apply)

Watch videos Comment on videos Like videos Share videos with friends

Upload videos Message or talk to other people in the comments

Other (please specify):

12. How often have you used YouTube in the past 3 months?

Daily or almost every day 2-3 times a week Weekly

Less than once a week Monthly Less than monthly

Never used

13. What kind of videos do you like to watch on YouTube?

Gaming Music Fashion/ beauty Vlogs

Lifestyle Advice Health/fitness Challenges

Short films Funny/viral videos TV/Films News

Other (please specify):

14. Do you have your own YouTube channel?

No

Yes – I upload videos regularly

Yes – I sometimes upload videos

Yes – but I don't upload videos

Section 4: YouTubers



Please list any other UK YouTubers that you watch regularly in the box below:

15. Please tick if you have ever watched any of these YouTubers:

- | | |
|--|---|
| <input type="checkbox"/> Ali-A | <input type="checkbox"/> PewDiePie |
| <input type="checkbox"/> Amazing Phil | <input type="checkbox"/> Fixiwoo |
| <input type="checkbox"/> BCC Trolling | <input type="checkbox"/> PointlessBlog |
| <input type="checkbox"/> Behzinga | <input type="checkbox"/> Sam Pepper |
| <input type="checkbox"/> Bubzbeauty | <input type="checkbox"/> SevenSuperGirls |
| <input type="checkbox"/> Calfreezy | <input type="checkbox"/> Slogloman |
| <input type="checkbox"/> Caspar Lee | <input type="checkbox"/> SprinkleofGlitter |
| <input type="checkbox"/> charieissoooollike | <input type="checkbox"/> Stampylonghead |
| <input type="checkbox"/> ComdeyShorts Gamer | <input type="checkbox"/> Syndicate Central |
| <input type="checkbox"/> Danisnotonfire | <input type="checkbox"/> Tanya Burr |
| <input type="checkbox"/> Didyouknowgaming | <input type="checkbox"/> TBJZL |
| <input type="checkbox"/> FRANKIEonP-Cin1080p | <input type="checkbox"/> ThatcherJoe |
| <input type="checkbox"/> iBallsticSquid | <input type="checkbox"/> The Diamond Minecart |
| <input type="checkbox"/> JacksGap | <input type="checkbox"/> The GamingLemon |
| <input type="checkbox"/> Jim Chapman | <input type="checkbox"/> The SyndicateProject |
| <input type="checkbox"/> Joe Weller | <input type="checkbox"/> TomSka |
| <input type="checkbox"/> KSI | <input type="checkbox"/> Vikkstar123 |
| <input type="checkbox"/> LDShadowLady | <input type="checkbox"/> W2S |
| <input type="checkbox"/> Marcus Butler | <input type="checkbox"/> Wayne Goss |
| <input type="checkbox"/> MasterOV | <input type="checkbox"/> YOGSCAST |
| <input type="checkbox"/> MessYourself | <input type="checkbox"/> YOGSCAST Lewis & Simon |
| <input type="checkbox"/> Mini Ladd | <input type="checkbox"/> YOGSCAST Sjin |
| <input type="checkbox"/> Miniminter | <input type="checkbox"/> Zerkaa |
| <input type="checkbox"/> MM7Games | <input type="checkbox"/> Zoella |
| <input type="checkbox"/> OfficialNerdCubed | |
| <input type="checkbox"/> Oli White | |

16. Please list your three favourite YouTubers:

1. -----
2. -----
3. -----

If you do not watch any YouTubers please go to question 23.

17. Do you follow your favourite YouTubers on any other social media?

- Facebook Instagram Snapchat Tumblr
- Twitter Vine Whatsapp
- Other (please specify) -----

18. What effects your decision to watch a video on YouTube (please tick all that apply)

- The topic/content The YouTuber The video title
- The video thumbnail The way they talk/language
- The quality of the filming The editing Number of views
- Number of likes

19. Do you ever use YouTube and other YouTuber social media channels to...?

- Contact / talk in the comments with the YouTuber
- Contact / talk in the comments with friends
- Contact / talk in the comments with people you haven't met offline
- None of the above

Section 5: YouTube and health



20. In general, how would you rate the health of the YouTubers you watch...?

- | | |
|------------------------------------|-------------------------------------|
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Good |
| <input type="checkbox"/> Fair | <input type="checkbox"/> Bad |
| <input type="checkbox"/> Very Bad | <input type="checkbox"/> Don't Know |

21. Can you remember seeing any of the following things being mentioned in the videos you have watched?

- | | |
|--|--|
| <input type="checkbox"/> Mental Health | <input type="checkbox"/> Friendships |
| <input type="checkbox"/> Relationships | <input type="checkbox"/> Food/Healthy Eating |
| <input type="checkbox"/> Confidence | <input type="checkbox"/> Alcohol |
| <input type="checkbox"/> Smoking | <input type="checkbox"/> Drugs |
| <input type="checkbox"/> Fitness/ Exercise | <input type="checkbox"/> Body image |
| <input type="checkbox"/> Sexual Health | <input type="checkbox"/> Illness or health condition (e.g. epilepsy, diabetes) |

22. Which YouTubers can you remember talking about these topics?

23. Have you ever used YouTube videos to look for advice on...?

- Mental Health Friendships Relationships
 Food/Healthy Eating Confidence Alcohol
 Smoking Drugs Fitness/ Exercise
 Body image Sexual Health
 Other (please specify) -----

24. I feel confident to...

	Yes	No	Don't Know
Find helpful health information on YouTube			
To use the health information I watch on YouTube to help me			
To use the information I find on YouTube to make health decisions			
Tell the difference between good and bad quality health information			
Tell the difference between what is real and what is fake			
Tell the difference between what is the YouTubers opinion and what is fact			
Know when the video is sponsored by a company or advertising a particular product			
Know when the video is sponsored or working with the NHS or a health charity			

25. Have you ever used YouTube to...

- | | | |
|---|------------------------------|-----------------------------|
| Look for videos of people with similar health concerns to you | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Post and reply to comments about health on YouTube videos | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Follow the health experiences of a YouTuber online | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Share videos about health with your friends on social media | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Follow a diet or exercise plan (on YouTube) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Make a video about your health experiences | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

26. What is your postcode?

Please enter as much of your postcode as you can remember into the box below. We will not use this information to contact you. We only need this to make sure we have a range of answers from different parts of Merseyside.

**Thank you for taking the time to complete this questionnaire.
Please hand your completed questionnaire back to the researcher or your teacher**



Appendix C: Focus Group Gatekeeper Information Sheet



Public Health Institute
Liverpool JMU
Henry Cotton Building
Webster Street
Liverpool
L3 2ET

Project title: Examining the role professional YouTubers play in young people's health identity and behaviour in the UK

Dear Head Teacher,

The Public Health Institute (www.cph.org.uk), Liverpool John Moore's University (LJMU) has a national reputation for carrying out research aimed at improving the health and wellbeing of young people. We are currently carrying out a PhD study exploring the health information that young people (13-18 years) encounter on YouTube and the way in which this information influences their own health behaviours. The results from this study will help us understand the role of YouTubers in shaping young people's attitudes towards health messages and help inform new approaches and guidelines to address young people's health.

As part of the research we wish to conduct a 1 hour focus group with a small group (8-10) of students from year 9, 10, 11, 12 or 13. The focus group will take place on school premises during school hours. We hope to get a sample of all areas across Merseyside; therefore **your participation is very important to us. Individual educational establishments or areas will not be identified in the research findings.**

It is important that you read this information before deciding to take part or not. Participation is voluntary. The Public Health Institute have conducted many studies like this in the past and you can be assured that our research adheres to rigorous ethical standards and research governance, including data protection guidelines. We have a well-established procedure for gaining parental and pupil consent to take part in the survey. All our researchers are enhanced DBS checked. If you decided to take part then the researcher will contact you with complete details. After data collection and analysis is complete we would also be delighted to discuss opportunities to present data from the whole study to your staff members.

A response slip is included with this letter. If you would like your school to participate please complete the enclosed participation request form and return it to j.harris@2016.ljmu.ac.uk.

If you have any further questions please contact Jane Harris at the email address above. If you have any concerns about the research or would like to speak to someone independent of the study please contact my Director of Studies Dr Lorna Porcellato L.A.Porcellato@ljmu.ac.uk

Yours Sincerely



Jane Harris

PhD Student, Public Health Institute, Liverpool John Moores University

School participation form

Please return this form to Jane Harris, j.harris@2016.ljmu.ac.uk

I *(please print your name)* wish/do not wish *(please delete as appropriate)* our school *(insert name below)*

.....

to participate in the research study 'Examining the role professional YouTubers play in young people's health identity and behaviour in the UK' which is to be conducted by Liverpool John Moores University in between September 2017 and April 2018.

If you wish to participate in the study please provide your contact details below

Email.....

Tel

The most convenient time to call is

.....

If you have any comments please add them in the box below.

If you have decided not to take part, please could you specify any reasons.

The school's role in the research

Once pupils have been selected for participation, the researcher will provide an 'opt-out' letter to parents which should be sent by the school to parent(s)/carer(s) of children under the age of 16. The letter will fully explain the research and ask parents to contact the research team if they have any questions regarding the study.

The researcher will take responsibility for printing and providing all materials to the school but the school will have the responsibility for disseminating information on the research to parents. The researcher will have responsibility to ensure that pupils who have opted out of the research do not complete the questionnaire but asks support from the school to ensure that parent's responses are communicated to the researcher.

Appendix D: Focus Group Gatekeeper Consent Form



LIVERPOOL JOHN MOORES UNIVERSITY GATEKEEPER CONSENT FORM

Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

Jane Harris, Post-graduate Researcher, Public Health Institute, Liverpool John Moores University

Please tick to confirm your understanding of the study and that you are happy for your school to take part and your facilities to be used to host parts of the project.

Please add some brief information about your project here that clarifies exactly what the gatekeeper is agreeing to

1. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily
2. I understand that parents/guardians of each student participating in the this study have been fully informed about the nature of the research via an information sheet sent home and that they have been given a reasonable period of time (1 week) to withdraw their child from participating in the study
3. I understand that the student's participation is voluntary and that I am free to withdraw the student at any time, without giving a reason and that this will not affect my legal rights.
4. I understand that any personal information collected during the study will be anonymised and remain confidential
5. I understand that the interview/focus group will be audio / video recorded and I am happy to proceed
6. I understand that parts of the conversations with the student's may be used verbatim in future publications or presentations but that such quotes

will be anonymised.

7. I am willing to act *in loco parentis* in regard to consenting students whose parents have not contacted me, into the study.

8. I agree for my school to take part in the above study

Name of Gatekeeper:

Date:

Signature:

Name of Researcher:

Date:

Signature:

Appendix E: Focus Group Parent information sheet and opt-out consent form



Public Health Institute
Liverpool John Moores
University
Henry Cotton building
15-21 Webster Street
L3 2ET

Project title: Examining the role professional YouTubers play in young people's health identity and behaviour in the UK

Dear parent(s)/guardian(s),

The Public Health Institute (www.cph.org.uk), Liverpool John Moore's University (LJMU) has a national reputation for carrying out research aimed at improving the health and wellbeing of young people. We are currently carrying out a PhD study exploring the health information that young people (13-18 years) encounter on YouTube and the way in which this information influences their own health behaviours. The results from this study will help us understand the role of YouTubers in shaping young people's attitudes towards health messages and help inform new approaches and guidelines to address young people's health. It is important for us to gain the views of a wide variety of young people, whether they watch YouTube videos or not. Further details of the study and a consent form are enclosed.

Your child's school has kindly agreed to participate in this study, which will be conducted between September 2017 and April 2018. This study will involve a 1 hour focus group with the researcher which will be completed in school during school hours. Your child will take part in the focus group with a group of 8-10 other young people from their year group. Young people will be asked questions regarding their opinions on the health messages they encounter on YouTube and their seeking of health information online. **All responses to the focus group will be anonymous and treated as confidential and the school and your child will not be named in any of the research findings.**

If you would prefer that your child DID NOT take part in the study, please complete and return the form below to your child's school. If the form is not returned before Wednesday 20th December 2017, your child will automatically be invited to participate in the study. However, they will still have the chance to withdraw from the study on the day of the focus group.

If you have any questions regarding the research please contact Jane Harris
j.harris1@ljmu.ac.uk or call 0151 231 4542 during office hours.

Best wishes,

J Harris

Jane Harris
PhD Student
Liverpool John Moores University
University Public Health Institute
Institute

L. Porcellato

Dr Lorna Porcellato
Reader
Liverpool John Moores
Public Health

I would prefer that my child _____ IS NOT involved in the above study.

Form room/form teacher: _____

Signed:

Full name:

Date: _____

Appendix F: Focus Group Participant Information Sheet



LIVERPOOL JOHN MOORES UNIVERSITY PARTICIPANT INFORMATION SHEET

Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

Jane Harris, PhD Student, Public Health Institute, Liverpool John Moores University

You are being invited to take part in a research study exploring young people's views on YouTubers and health messages. Before you decide if you want to take part, it is important that you understand why the research is being done and what it involves. Please take time to read this information. Ask your teacher if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not

1. What is the purpose of the study?

The research is part of a post-graduate student project exploring young people's views on YouTube, YouTubers and health. We want to find out more about your views on YouTubers and health messages.

You have been invited to take part in this research because you are a pupil at one of ten schools in Merseyside who have been randomly chosen to take part.

2. Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do, will be invited to take part in a focus group with 7-9 other people from your year group. The focus group will take place in a private room at your school during school hours. You will be given the chance to ask any questions and asked to sign a consent form. Even if you do initially decide to take part, you are still free to stop at any time and without giving a reason. This research is independent from your school and a decision to stop will not affect your education in any way.

3. What will happen to me if I take part?

If you do decide to take part, you will be asked to come to continue with the focus group. Before the focus group you will be asked to sign a consent form to say you are happy to take part. The focus group will ask about your opinions of YouTube and YouTubers and health messages you may have seen. There are no right or wrong answers and you do not have to answer any questions that you do not want to. The focus group should take around 1 hour to complete.

4. Are there any risks / benefits involved?

There are no direct risks or benefits to taking part/ not taking part. This means that nothing good/bad will happen if you decide you do or don't want to take part. You do not have to answer and any questions that you do not want to. Please remember that if you tell us that you intend to hurt yourself or someone else we will need to report this to your school.

5. Will my taking part in the study be kept confidential?

If you choose to take part, we promise anything that you say to us will remain confidential. This means that nobody apart from the researcher will know what you have said. We ask that all participants respect the confidentiality of the other participants although the researcher cannot guarantee that all participants will adhere to this rule. The researcher will record the focus group using a digital recorder. Only the researcher will listen to this recording. The recording will be stored on a password protected computer at LJMU and after it has been transcribed it will be deleted. Any information such as names or personal information (such as your school) which could identify you will not be included in any reports or publications.

This study has received ethical approval from LJMU's Research Ethics Committee (Ref: insert)

What do I do next?

If, having read this information sheet you do **not** wish to take part in the research then you do not need to do anything else. You can tell your teacher or the researcher that you do not want to take part.

If you decide that you **do** wish to take part in the research, you will be asked to continue with the focus group.

If you have any questions or want more information you can ask your teacher or you can contact the researcher yourself:

Contact Details of Researcher:

Jane Harris,

Public Health Institute

Henry Cotton Campus

Liverpool John Moores University

15-21 Webster Street

Liverpool

L3 2ET

j.harris1@ljmu.ac.uk

0151 231 4506

Thank you for reading this information

Appendix H: Focus Group Discussion Guide



Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

Jane Harris, PhD Student, Public Health Institute, Liverpool John Moores University

Focus Group Discussion Guide

Hi, my name is Jane Harris and I am a PhD student from the Public Health Institute at Liverpool John Moores University. First of all, thank you for agreeing to take part in the study; I really appreciate the time you have given.

This study is part of my PhD and is looking at your views of YouTube and young people's health

There are no right or wrong answers and please respect the opinions of everyone in the focus group even if you do not agree. If you would like to stop taking part in the focus group at any point, you are free to stop at any time. We won't use your name or anything that could identify you personally in any reports or publications.

If it is okay, I would like to tape record the conversation so I can give you my full attention. These recordings will only be heard by the researcher and will be deleted after they have been written up. The recordings will be stored digitally on a secure computer.

After the interview, I will write up the conversation using detailed notes, this will be saved on a secure computer, and no-one but the research team will have access to it. You will have the opportunity to review the transcript and make any changes. After this I shall delete the original recording from this recorder. I may use parts of what is said in the report but your name will not appear next to it.

I have a copy of all of your signed consent forms, are you still happy to take part in the study? Have you all had a chance to read the information sheet? Do you have any questions about the study before we begin?

1) Ice breaker – ranking exercise

Participants will be asked to rank sources of health information. The researcher will provide the group with ten pre-printed cards with sources of health information: GP/doctor, NHS Direct, Parents/guardians, Other family, Friends, YouTube, Social Media, Newspaper/Magazines, TV, Websites. Spare cards will be provided so that participants can add any other sources of health information they feel are missing.

The participants will then be asked to reach a group consensus by ranking the sources of health information - laying them out on the table in order. They will be asked to do this in two ways:

- 1) Where do you look for health information most often?
- 2) Which health information is the best quality and most accurate?

The researcher will encourage participants to discuss their decision making process and use prompts throughout the exercise.

2) YouTube and health

One of the sources of information we looked at was YouTube:

- 1) What kind of health information can you find on YouTube?
Prompts: Source, messages, channels, who is intended to watch them. Experience vs factual
- 2) What are the advantages/ good points of this information on YouTube?
Prompts: Easy to access? Private? Easy to understand? Easy to relate to?
- 3) What are the disadvantages/ problems with health information on YouTube?
Prompts: is it accurate, opinion vs fact, quality, bias
- 4) Do you think in general YouTube is a good or bad place to look for health information
Why. Do you have any examples?

3) YouTubers and Health

Moving on to think about YouTubers,

- 1) Can you think of examples of YouTubers talking about health messages?
- 2) What are the advantages/ disadvantages of this information?
Prompts: relatable, easy to understand, easy to access, quality, truthfulness, accuracy
- 3) Here are five pictures of popular UK YouTubers (*taken from netnographic study*), can you tell me what kind of health messages these YouTubers talk about?

4) YouTube videos

The participants will be shown three short excerpts (1-3 minutes) of YouTube videos selected from the netnographic analysis. Videos will be selected to ensure they are subjects which are suitable for the focus group age and which do not contain any potentially distressing or sensitive topics.

Video 1: Attitudes – a clip will be selected in which a YouTuber is giving their opinion on a certain health related behaviour

- 1) What was the main message of this video?

- 2) After watching this video, what is your opinion of behaviour x? – *Has it changed your opinions in anyway?*
- 3) Was this video good quality? – why/why not?
- 4) Was the information in this video true/accurate? – why/why not?

Video 2: Subjective norms – a clip will be selected in which a YouTuber is talking about their experiences of a certain healthy/unhealthy behaviour

- 1) What is the main message of this video?
- 2) Do you think health behaviour x is important/ not important? *How do you feel about people who do behaviour x?*
- 3) Was this video good quality? – why/why not?
- 4) Was the information in this video true/accurate? – why/why not?

Video 3: Perceived behavioural control – a clip will be shown in which a YouTuber is performing a certain healthy/unhealthy behaviour

- 1) What is the main message of this video?
- 2) After watching this video, do you think behaviour x is something you could do? *How confident do you feel about it? Why do you feel this way?*
- 3) Was this video good quality? – why/why not?
- 4) Was the information in this video true/accurate? – why/why not?

5) Closing questions

- 1) After watching these videos, how do you feel about the health topics YouTubers talk about? Has your opinion changed in anyway?
- 2) Do you have anything you would like to add?
- 3) Are there any questions about what we have discussed?

Signpost to relevant online and school health resources – this will be specific to the YouTube video topics viewed and selected in consultation with teachers from each school

Thank participants for taking part, explain how the research findings will be used. Remind participants of researcher contact details.

Appendix I: Interview Gatekeeper Information Sheet



Dear Management Company

Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

We are inviting your YouTube clients to take part in a research study which is being carried out by the Public Health Institute at Liverpool John Moores University. The Public Health Institute (www.cph.org.uk), Liverpool John Moore's University (LJMU) has a national reputation for carrying out research aimed at improving the health and wellbeing of young people.

What is the purpose of the study?

We are currently carrying out a PhD study exploring the health information that young people (13-18 years) encounter on YouTube and the way in which this information influences their own health behaviours. We are interested in including your clients' in the study, even if they do not specifically make YouTube videos on health related topics. The results from this study will help us understand the role YouTubers play in shaping young people's attitudes towards health messages and help inform new approaches and guidelines to address young people' health.

What is required of my clients?

The study involves semi-structured interviews with YouTubers to explore any health content they may produce on YouTube and the role they believe they play in communicating health messages to young people. There are no right or wrong answers, your clients do not have to answer any questions they do not wish to and they can withdraw at any time. The interview will last around one hour and can take place in person, via telephone or skype. The interview is anonymous and confidential and neither your client nor your company will be identified in any publications or reports. Please note that due to the public nature of your client's videos it may still be possible to identify them from their quotes but no names or person identifiable details will be used. This study has received ethical approval from LJMU's Research Ethics Committee (16/PBH/009).

We would like to ask for your help by forwarding this information to any clients who may wish to take part. If you are happy to do so, please sign the attached gatekeeper consent form. If your client would then like to participate in the research they can contact the researcher directly: j.harris1@ljmu.ac.uk

If you or your client would like to find out more about the research outcomes, have any questions or want more information then please contact the researcher: Jane Harris j.harris1@ljmu.ac.uk.

Kind regards,

A handwritten signature in black ink that reads 'J Harris'.

Jane Harris
PhD Student
Liverpool John Moores University

A handwritten signature in black ink that reads 'L. Porcellato'.

Dr Lorna Porcellato
Reader
Liverpool John Moores
University

Appendix J: Interview Gatekeeper consent form



LIVERPOOL JOHN MOORES UNIVERSITY GATEKEEPER CONSENT FORM

Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

Jane Harris, Post-graduate Researcher, Public Health Institute, Liverpool John Moores University

Please tick to confirm your understanding of the study and that you are happy for your organisation to take part and your facilities to be used to host parts of the project.

Please add some brief information about your project here that clarifies exactly what the gatekeeper is agreeing to

1. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that participation of our organisation and clients in the research is voluntary and that they are free to withdraw at any time, without giving a reason and that this will not affect legal rights.

3. I understand that any personal information collected during the study will be anonymised and remain confidential.

4. I agree for our organisation and students/members to take part in the above study.

5. I agree to conform to the data protection act

Name of Gatekeeper:

Date:

Signature:

Name of Researcher:

Date:

Signature:

Name of Person taking consent:

Date:

Signature:

(if different from researcher)

Appendix K: Interview participant information sheet



LIVERPOOL JOHN MOORES UNIVERSITY PARTICIPANT INFORMATION SHEET

Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

Jane Harris, PhD Student, Public Health Institute, Liverpool John Moores University

You are being invited to take part in a research study exploring your views on YouTube and health messages for young people. Before you decide if you want to take part, it is important that you understand why the research is being done and what it involves. Please take time to read this information. Ask the researcher if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not

1. What is the purpose of the study?

The research is part of a post-graduate student project exploring YouTube, YouTubers, young people and health. We want to find out more about your views on YouTubers and health messages.

You have been invited to take part in this research because you are a UK YouTuber.

2. Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do, you will be invited to take part in an interview with the researcher. Depending on your preference, the interview can take place face to face, on the telephone or on skype. You will be given the chance to ask any questions and asked to sign a consent form. Even if you do initially decide to take part, you are still free to stop at any time and without giving a reason. A decision to stop will not affect your rights in any way.

3. What will happen to me if I take part?

If you do decide to take part, you will be asked to take part in an interview at a time and place that is convenient for you. You will be asked if you prefer to complete the interview in person, on the telephone or via skype. Before the interview you will be asked to sign a consent form to say you are happy to take part. The interview will ask about your opinions and experiences of YouTube and health messages. There are no right or wrong answers and you do not have to answer any questions that you do not want to. The interview should take around 1 hour to complete.

4. Are there any risks / benefits involved?

There are no direct risks or benefits to taking part/ not taking part. You do not have to answer and any questions that you do not want to. Please remember that if you tell us that you intend to harm yourself or someone else or disclose any criminal activity then we will have to report this to the relevant authority.

5. Will my taking part in the study be kept confidential?

If you choose to take part, we promise anything that you say to us will remain confidential. The researcher will record the focus group using a digital recorder; only the researcher will listen to this recording. The recording will be stored on a password protected computer at LJMU and after it has been transcribed it will be deleted. Any information such as names or personal information which could identify you will not be included in any reports or publications. Please note that due to the public nature of your videos it may still be possible for readers to identify you from your quotes but no names or person identifiable details will be used.

This study has received ethical approval from LJMU's Research Ethics Committee (Ref: 17/PBH/017)

What do I do next?

If, having read this information sheet you do **not** wish to take part in the research then you do not need to do anything else.

If you decide that you **do** wish to take part in the research, please contact the researcher using the contact details below. The researcher will provide you will a consent form and arrange a suitable time for the interview

If you have any questions or want more information you can ask your teacher or you can contact the researcher yourself:

Contact Details of Researcher:

Jane Harris,
Public Health Institute
Henry Cotton Campus
Liverpool John Moores University
15-21 Webster Street
Liverpool
L3 2ET
j.harris1@ljmu.ac.uk
0151 231 4506

Thank you for reading this information

Appendix L: Interview Consent Form



LIVERPOOL JOHN MOORES UNIVERSITY CONSENT FORM

Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

Jane Harris, PhD Student, Public Health Institute, Liverpool John Moores University

1. I confirm that I have read and understand the information provided for the above study. I have had the time to think about the information, ask any questions and have had these questions answered.
2. I understand that taking part is voluntary and that I am free to stop at any time, without giving a reason and that this will not affect my legal rights.
3. I understand that any personal information collected during the study will be anonymised and remain confidential
4. I agree to take part in the interview
5. I understand that the interview will be audio recorded and I am happy to continue
6. I understand that parts of our conversation may be quoted in future publications or presentations but that these quotes will be anonymised.

Name of Participant

Date

Signature

Name of Researcher

Date

Signature

Name of Person taking consent

Date

Signature

(if different from researcher)

Note: When completed 1 copy for participant and 1 copy for researcher

Appendix M: Interview discussion guide



Examining the role professional YouTubers play in young people's health identity and behaviour in the UK.

Jane Harris, PhD Student, Public Health Institute, Liverpool John Moores University

Interview Discussion Guide

Hi, my name is Jane Harris and I am a PhD student from the Public Health Institute at Liverpool John Moores University. First of all, thank you for agreeing to take part in the study; I really appreciate the time you have given.

This study is part of my PhD and is looking at your views of YouTube and young people's health.

If you would like to stop taking part in the interview at any point, you are free to stop at any time. We won't use your name or anything that could identify you personally in any reports or publications.

If it is okay, I would like to tape record the conversation so I can give you my full attention. These recordings will only be heard by the researcher and will be deleted after they have been written up. The recordings will be stored digitally on a secure computer.

After the interview, I will write up the conversation using detailed notes, this will be saved on a secure computer, and no-one but the research team will have access to it. You will have the opportunity to review the transcript and make any changes. After this I shall delete the original recording from this recorder. I may use parts of what is said in the report but your name will not appear next to it.

I have received a copy of your signed consent form, are you still happy to take part in the study? Have you all had a chance to read the information sheet? Do you have any questions about the study before we begin?

Part one: interview questions

Topic focus	Core Questions	Additional Questions
Introductory questions	Can you tell me a bit about your YouTube channel and your videos? How did you start making videos on YouTube?	What kind of videos do you make? What is the main theme/ message of your channel? How many subscribers do you have? When did you start your channel?

		<p><i>Knowledge:</i> How did you first hear about YouTube?</p> <p><i>Persuasion:</i> What persuaded you/ made you interested in making videos?</p> <p><i>Decision:</i> What made you pick up the camera and film for the first time?</p> <p><i>Implementation:</i> Where did you make your first video? How did you film/edit it? What has changed?</p> <p><i>Confirmation:</i> How did you feel when you made your first video? What made you decide to continue?</p>
Health messages on YouTube	<p>Is health something you particularly talk about on YouTube?</p> <p>What kind of reaction have you got to these kinds of videos?</p> <p>Have you ever been approached by a company, charity or the NHS to make a health related video?</p>	<p>If no, why not?</p> <p>If yes, which health topics have you spoken about?</p> <p>Why did you chose to talk about these topics?</p> <p>Do your viewers/like dislike them?</p> <p>How does this compare to other videos?</p> <p>Have viewers found them helpful?</p> <p>If yes, what topics, by whom?</p> <p>How were you prepared to make the video – what information did you receive beforehand?</p> <p>Was this a positive or negative experience – why?</p>
Health behaviours on YouTube	<p>Do you share any behaviours/habits which you consider to be healthy on YouTube?</p> <p>Do you share any behaviours/habits which</p>	<p>Prompts: physical activity/going to the gym, food/diet, mental wellbeing etc.</p> <p>Prompts: smoking, alcohol etc.</p>

	<p>you consider to be unhealthy on YouTube?</p>	<p>Can you think of an example when you have shared your opinion on why these behaviours are healthy/unhealthy?</p>
<p>Youtuber's role in health communication</p>	<p>Do you view yourself as a "role model" for younger viewers?</p> <p>Do you feel you play a role in communicating health information to young people?</p> <p>What impact do you think the health information you share has on your viewers?</p>	<p>Why/why not?</p> <p>What does it mean to be a "role model"?</p> <p>What do you think are your viewers' opinions on this?</p> <p>Are there benefits/pressures in this role?</p> <p>Is this a role you have chosen?</p> <p>What are the benefits of you sharing this information?</p> <p>What problems/risks does this role create for you?</p> <p>Does it have an impact – can you give examples?</p> <p>What are the benefits for your viewers? (prompts: relatable, increase self-efficacy, change attitudes and norms)</p> <p>What are the risks? (prompts: accuracy of message, knowledge/ expertise, separate opinions from fact)</p>