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Report of a Non-Diet Weight Management Programme

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Background

Obesity is a major concern in England with the latest statistics showing 22% of males and 24% of females are obese and if including the overweight the overall figure raises to 42% (Health Survey England, 2009). The Foresight Report (2007) found the cost of overweight and obesity to the NHS was around £4.2 billion, predicted to rise to £6.3 billion by 2015 (Department of Health, 2008). Obesity also has colossal financial costs to the government and to National Businesses; the National Audit Office estimated £18 million pound is spent on sickness absence with a broader cost to the UK economy of £2 billion per year – based on an audit in 1998 (National Audit Office, 2001). More recent figures from a report by the Health Safety Executive (HSE) entitled, “Healthy workplace, healthy workforce, better business delivery” show overall work days lost to sickness are up to £28 million (HSE, 2006). The government also estimates national economical costs to be £6.6-7.4 billion if including the overweight and obese (McCormick, 2007).

These financial restraints are astronomical; however, the human health costs are also phenomenal. Obesity and overweight increases both morbidity and mortality and can lead to debilitating disease such as type 2 diabetes, cardiovascular disease, orthopaedic problems, sleep apnoea and fatigue which can all lead to accidents and increased absence (HSE, 2006). The HSE (2006) suggest that employers should be aware of the risk assessment with obese employees and play a role in countering obesity, with well-being initiatives such as healthier food in staff restaurants. While healthier food is important a more holistic approach is needed (Bacon and Amphramor, 2011). The condition of obesity and overweight needs to be tackled to alleviate both the national economical burden and to improve the health of the nation’s workforce. The Department of Health suggests a reduction of body weight by approximately 5-10% can make major improvements to health and the co-morbidities associated with being obese or overweight (Department of Health, 2006). Furthermore, emerging evidence suggests a focus on an holistic approach to weight

management that includes promotion of: body satisfaction, respect of body size, a more intuitive approach to eating, improvements in self esteem/efficacy, physical activity and independence. These indicators are considered successful lifestyle changes at a range of body weights (Bacon and Aphramor, 2011).

LJMU Weight Management Centre

LJMU has piloted a number of initiatives on weight management that have focused on positive behavioural change, rather than weight loss. This current report shows the results of a one day study on a flexible/intuitive approach to eating behaviour with an emphasis on improving body acceptance and self efficacy/esteem, self belief and motivation. Furthermore, testimonials of an 8 week version of the seminar are presented and a case study of an overweight pregnant woman centred on healthy eating rather than weight loss.

Study 1: One-day Intuitive eating and behavioural change seminar

Aims:

The aim of the study was to pilot the effect of a one day intuitive eating/behavioural change seminar on levels of body image dissatisfaction (BID), intuitive eating behaviour, and self esteem.

Methods

Participants

The sample consisted of six individuals, three male and three females age range 39-57 Body mass index (BMI) range 26-40; categorising all participants as either overweight or obese.

Intuitive eating and behavioural change seminar

The participants were invited to attend a weight management seminar that delivered strategies on how to control their weight by using a non-diet approach (Smith and Hawks, 2006; Tylka 2006; Bacon and Aphramor, 2011). It also encouraged participants to set realistic and achievable goals that were not weight loss based, e.g.

focusing on the ability to do/achieve something positive. Mind-body strategies including neuro-linguistic programming (NLP) and a mindfulness approach were used to support the seminar. For example the use of guided imagery, relaxation and visualisation techniques were employed to alleviate emotional eating, improve body satisfaction, become self motivated, and improve self esteem/efficacy. Mind-body strategies are emerging as useful adjuncts to weight management programmes (Koithan, 2009). Participants were also given a delegate handbook with detailed instructions with homework tasks to reinforce the information delivered on the seminar.

Questionnaire

Participants completed a questionnaire pre and post seminar; the questionnaire was designed to assess intuitive eating (Tylka, 2006); Self Esteem (Rosenburg, 1979), and Physical appearance (Reed, et al. 1991).

Anamorphic Micro

Anamorphic Micro is a computer based programme that enables a photograph of the participant to be uploaded and manipulated to different sizes (Symplex Information Solutions, 2005-2008). Participants were asked to have a full length fully clothed picture taken, which was then uploaded onto the software. This picture was then manipulated by the programme to look either wider or narrower than the original image. The participants were asked to manipulate the picture to show 'how they think they look' in reality and to manipulate the photograph to show 'how they would like to look'. The participants were asked to repeat this process and a mean score was recorded for Body Image Perception (BIP) (difference between ESTIMATED body size and TRUE body size), Objective body image dissatisfaction (BID) (difference between DESIRED body size and TRUE body size) and subjective body image dissatisfaction (BID) (difference between DESIRED body size and ESTIMATED body size).

Semi structured interviews

Semi structured interview questions were designed to gain an understanding of the motivation of the participants to attend the seminar and their self efficacy. Levels of intuitiveness regarding their eating behaviours and self image were observed through questioning (adapted from Tylka, 2006). NLP techniques aimed to recalibrate the arbitration of the neurological processes and the language involved with the participants learned behaviour patterns (Bandler & Grinder, 1975). Therefore, the semi-structured interview questions were designed from an NLP perspective, which enhances the quality of the interviews (Tosey and Mathison, 2010). All questions were given a positive approach, for example; '*in a positive way, can you explain what it is you wish to gain from attending the seminar*', this is an approach adopted to increase motivation, by suggesting there is a gain individuals will be motivated to participate. Participants were asked to '*think*' rather than to '*feel*'

for example; '*can you explain how you think hunger makes you feel*'. By presenting the questioning in this manner, it changes the linguistic representation of the language structure, thus suggesting the answers emanate from a thought process rather than an emotion (Bandler & Grinder, 1975).

Study 1 Results & Discussion

All participants (n=6) attended the Weight management seminar. The questionnaires were scored in different sections and as an overall score. Table 1 shows the results before and three weeks after attending the one-day seminar. Paired t-test results showed a significant increase in intuitive eating behaviour self esteem, physical appearance, and overall score. When interpreting the data from anamorphic micro, the closer the number is to 100 the greater the improvement in body satisfaction. Objective dissatisfaction showed a significant improvement, while both body image perception and subjective dissatisfaction showed improvements but not statistically significant (Table 1).

Table 1. Questionnaire scores

Questionnaire scores	Before seminar (Mean ± SD)	Three weeks post seminar (Mean ± SD)	P value
Mean score, Intuitive Eating	3.21 ± 0.09	3.61 ± 0.27	<u>.022</u>
Mean score, Self Esteem	3.58 ± 0.35	3.94 ± 0.40	<u>.021</u>
Mean score, Physical Appearance	3.43 ± 0.8	3.78 ± 0.76	<u>.039</u>
Mean Overall score - Mean Overall score ²	3.34 ± 0.56	3.69 ± 0.34	<u>.032</u>
Body Image Perception (Anamorphic Micro)	112 ± 16.22	104.3 ± 8.41	.243
Objective Dissatisfaction (Anamorphic Micro)	81.8 ± 15.52	92.92 ± 7.91	<u>.049</u>
Subjective Dissatisfaction (Anamorphic Micro)	89.0 ± 6.54	94.83 ± 12.7	.234

Intuitive eating

A higher score for intuitive eating indicates participants were beginning to listen to their bodies rather than follow a set of “dieting” rules. Tylka (2006) made similar findings and showed that dieting mentality and BMI are inversely related to intuitive eating. This is further evidenced from the “Health at every Size” group, where several studies have shown a reduction in dieting mentality improves eating behaviour to a more intuitive nature e.g. they learn to listen to their bodies for internal cues of hunger (reviewed in Bacon and Aphramor, 2011).

Self esteem

Research shows that feelings of low self esteem can contribute to weight gain (Gingras et al, 2004). Therefore, in order for an individual to successfully lose or maintain their weight it is important to address self esteem issues (Cochrane, 2008). The weight management seminar also addressed self esteem issues in order to promote higher levels of success in weight management, employing NLP techniques (Bandler and Grinder, 1975). After attending the weight management seminar, self esteem showed a 10% increase ($p = 0.021$) (Table 1.0). Parham (1999) found that by increasing self esteem and promoting ‘body size acceptance’ individuals were less likely to undertake extreme eating behaviours and make inaccessible goals which can lead to feelings of failure and a decrease in self esteem. Therefore, performing tasks to increase self esteem can be a useful adjunct to successful weight management.

Physical appearance and Body satisfaction

Part of the questionnaire was concerned with how anxious, tense or nervous the participants were concerned about different parts of their physical appearance. Research has found a strong link between obesity and poor body image (Schwartz and Brownell, 2004). The results of the physical appearance section of the questionnaire showed a 32% increase ($p = 0.039$), indicating an overall improvement in how the participants perceived different parts of their bodies. This shows that the participant's perception of their physical appearance was significantly improved by attending the weight management seminar, which may have contributed to the improvement in self esteem. Further analysis of the current study showed a strong positive correlation between physical appearance anxiety and objective body image dissatisfaction both pre ($r = 0.819$, $p = 0.046$) and post ($r = 0.949$, $p = 0.004$) seminar indicating a tight relationship with appearance anxiety and body dissatisfaction.

Anamorphic micro was employed to test individual's body image perception (BIP), objective dissatisfaction and subjective dissatisfaction. The results shown in Table 1 show the data for each section both pre and post weight management seminar. According to Anamorphic Micro an individual shows no dissatisfaction with a score of 100. Therefore the closer the individual's scores are to 100 for each section the lower the level of dissatisfaction they are experiencing. Mean scores (Table 1) showed improvement for each section after attending the weight management seminar. Gingras et al (2004) found individuals with lower appearance evaluation also had high body dissatisfaction and found that addressing issues concerning body image acceptance could lead to an improvement in health and lifestyle. The results for the current study show a positive behaviour change in a similar way, highlighting that providing solutions for appearance anxiety and body dissatisfaction may lead to a healthier lifestyle and greater weight control.

Semi-structured interviews

The participants were interviewed before and three weeks after the seminar, there were 5 main areas of information aimed to be accomplished from the first interview:

- reasons of motivation for enrolment,
- self efficacy for accomplishing this aim,
- thought of past accomplishments of this aim and how this was attempted,
- levels of intuitiveness regarding their eating behaviours,
- and self image.

Table2. Interview quotes

Interview question	Pre seminar
<i>'in a positive manner, what is it you wish to gain from the seminar?'</i>	<i>'I don't want knowledge of calories, carbs, protein and fat..I know all that...I want to try to get control...I over eat when I know it's damaging'.</i>
<i>'in a positive manner, what is it you wish to gain from the seminar?'</i>	<i>'I can do the weight loss thing...I have proved that 4 or 5 times since my early twenties...that's the easy bit, it's the next bit I have had trouble with...keeping it off...'</i>
<i>'can you explain how you think satiety makes you feel?'</i>	<i>'stuffed like I couldn't put any more in...that I wouldn't get anymore enjoyment out of putting anymore in'.</i>
<i>'do you think you taste your food and enjoy what you taste?'</i>	<i>'some days my lunch is 4 o'clock...and by then I'm so hungry I eat my lunch and a Snicker!'</i>
<i>'Do you think you always finish everything on your plate?'</i>	<i>'A wicked waste...that was my mother...she used to re-serve me food over and over again until it was rancid'.</i>
<i>"What do you think about your body weight?'</i>	<i>'I'm a fat cow...rolls of fat everywhere...I worry about seeing my brother...I was 2 stone lighter when I last saw him and he called me 'matronly'...I hate to think what he would think of me now!'</i>

After the seminar the participants were simply asked to report if they thought attending the seminar had affected their lives in any way and if they had attempted any of the NLP techniques since the seminar. Quotes below:

“this isn’t about going on a diet...it’s about going from disordered eating to ordered eating...I don’t want to live were food is a constant threat all the time...were I’m boring people to death...with I can’t eat this food or that food...I loathe people being prissy about food...the seminar was good...really good...not being on a diet is liberating...being on a diet is foul”.

“on the day it was life changing for me...I’ve done visualisation before and it doesn’t work for me...this did...I see it in the back of my head...I found the day very relaxing”.

“I tried mindfully eating...it was good, I really think it can work”

“I was visualising eating to a Millie’s Cookie in the card shop on Saturday...I was talking to it....’Do I want to eat you?’”

This current report provides a brief overview of the qualitative interviews; a more complete version is available at request. Table 2 shows some of the quotes from the interviews pre seminar. The quotes highlight the participants had a knowledge of nutrition and could indeed achieve weight loss, but struggled with weight maintenance and described this as a struggle leading to weight cycling – a combination of dieting to lose weight followed by feelings of failure. A phenomenon well documented in the field of psychology called the restrained eating theory relates to weight cycling, as attempting to control weight by restricting food intake is extremely cognitive and can lead to feelings of deprivation, and food preoccupation - many find this difficult to adhere to (Markowitz et al, 2008). Following the seminar the participants showed relief of not being on a diet and an ability to practice some of the NLP techniques leading to a more relaxed state around food.

Conclusion

This study showed that a one day seminar, which provided information and guidance on a more flexible approach to eating behaviour has many benefits. Participants were shown to become more intuitive around food; a more intuitive approach to eating includes the ability to recognise internal hunger sensations, to become aware of the many different taste sensations and learning to recognise the enjoyment around food. Furthermore, the seminar not only delivered this information but also gave useful “take home” techniques that help to create new habits that help eating behaviour, self esteem and body satisfaction.

The study did have several limitations including self reported body weight and height; however, as the weight management programme has a strong emphasis on positive behaviour change it was thought that measuring body weight could be considered a negative trigger for the participants. The one day seminar was considered to provide enough information for the participants to think about weight management in a different way and to start a process of behaviour change. However, participant feedback showed a desire for a longer course to enable practice while receiving support.

References:

- Aylott, J. Brown, I. Copeland, R. Johnson, D. (2008). Tackling Obesities: The Foresight Report and Implications to Local Government. *Final Report*.
- Bacon, L and Aphramor, B (2011). "Weight Science: Evaluating the Evidence for a Paradigm Shift". *Nutritional Journal* 10:9.
- Bandler, R. & Grinder, J. (1975), *The Structure of Magic (i) A Book About Language and Therapy*, Penguin, California.
- Cochrane G. (2008). "Role for a sense of self-worth in weight-loss treatments: helping patients develop self-efficacy". *Can Fam Physician* 54(4):543-7.
- Department of Health (2006). "Raising the Issue of Weight in Adults".
- Gingras, J. Fitzpatrick, J. McCargar, L. (2004). Body image of chronic dieters: Lowered appearance evaluation and body satisfaction. *Journal of the American Dietetic Association*. 104:10:1589-1592.
- HSE (2006). "Healthy workplace, healthy workforce, better business delivery".
- HSE (2006). "HSE Horizon Scanning Intelligence Group Short Report Obesity as a Workplace Issue".
- Koithan, M (2009). "Mind-Body Solutions for Obesity". *J Nurse Pract.* 5(7): 536–537.
- Markowitz, JT; Butryn, L; Lowe, MR (2008). "Perceived deprivation, restrained eating and susceptibility to weight gain. *Appetite* 51: 720-722.
- McCormick (2007). "Economic costs of obesity and the case for government intervention". *Obesity Reviews* 8: 161-164.
- National audit office (2001). "Tackling Obesity in England". The Stationary Office, London.
- Reed, D. Thompson, K. Brannick, M. Sacco, W. (1991). Development and Validation of the Physical Appearance State and Trait Anxiety Scale (PASTAS). *Journal of Anxiety Disorders*. 5(4)323-332.
- Rosenburg, M. (1979). *Conceiving the Self*. New York. Basic Books.
- Schwartz, M. Brownell, K. (2004). Obesity and Body Image. *Body Image*. 1;43-56.
- Smith, T. Hawks, S. (2006). Intuitive Eating, Diet Composition, and the Meaning of Food in Healthy Weight Promotion. *American Journal of Health Education*. 37(3)130-136.
- Symplex Information Systems, (2005-2008). Anamorphic Micro. Online. Available from www.symplexsoftware.com/solutions/Anamorphicmicro. Accessed 09/10/09.
- Tosey, P and Mathison, J (2010). "Exploring inner landscapes through psychophenomenology. The contribution of neuro-linguistic programming to innovations in researching first person experience". *Qualitative Research in Organisations and Management: An International Journal* Vol.5 (1) 63-82.
- Tylka, T. (2006). Development and Psychometric Evaluation of a Measure of Intuitive Eating. *Journal of Counselling Psychology*. 53(2)226-240.

