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5 Method with an Elite Athlete
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7 Henrik Gustafsson
8 Karlstad University & Swedish Olympic Committee
9 Carolina Lundqvist
10 The Swedish School of Sport Science and Health & Swedish Olympic Committee
11 David Tod
12 Liverpool John Moores University
13
14
15
16 Author Note
17 Henrik Gustafsson, Faculty of Health, Science and Technology, Karlstad University; Carolina
18 Lundqvist, The Swedish School of Sport Science and Health; David Tod
19 School of Sport and Exercise Sciences, Liverpool John Moores University.
20
21 Correspondence concerning this article should be addressed to Henrik Gustafsson, Faculty of
22 Health, Science and Technology, Karlstad University, 651 88, Karlstad, Sweden. Email:
23 henrik.gustafsson@kau.se.
24
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Cognitive Behavioral Intervention in Sport Psychology: A Case Illustration of the Exposure Method with an Elite Athlete

FOR BLIND REVIEW

Abstract

One common method in Cognitive behavior therapy (CBT) to treat anxiety problems is exposure, but there are few articles examining its applicability to sport. The aim of this paper is to give a background of the use of exposure in sport and present a case of how exposure can be used with athletes. The athlete was a 17 year old female cross-country skier with high levels of performance anxiety. In the case description common procedures in CBT such as behavioral analysis, psychoeducation, and exposure are presented and how anxiety can be managed. After the intervention the athlete perceived lower levels of anxiety as well as improved behavioral repertoire (e.g., less avoidant behaviors and more functional sport specific behaviors). This case may be used to help practitioners consider the use of exposure in competitive sports.

Keywords: sport psychology delivery, elite athletes, performance preparation

Cognitive Behavioral Intervention in Sport Psychology: A Case Illustration of the Exposure Method with an Elite Athlete

Cognitive behavioral therapy (CBT) is today considered by many psychologists as the most evidence-based treatment for a number of psychological syndromes in different environments (c.f., Hofmann, Asmundson, & Beck, 2013). When adopted in sport psychology, CBT can be seen as Cognitive Behavioral *Training* (Gustafsson & Lundqvist, 2016) by which athletes practice to change dysfunctional performance-related behaviors (e.g., avoiding certain anxiety provoking situations) into functional behaviors (e.g., follow the game plan or taking the penalty kick despite experiences of anxiety).

CBT combines the two psychological traditions of Behavior Therapy and Cognitive Therapy (Craske, 2010). Much of the applied work published until today in sport psychology literature has been rooted in the early cognitive behavioral therapy tradition evolving in the late 60s and the 70s, which was then highly influenced by cognitive theory (Whelan, Mahoney, & Meyers, 1991). Less attention has however been given to techniques from the behavior therapy arm of CBT. Behavior therapy puts a strong emphasis on learning theory where respondent conditioning, operant conditioning, and modeling are central cornerstones and through which both adaptive and maladaptive behaviors are considered to be learned (cf. Farmer & Chapman, 2008). One important intervention from behavior therapy is exposure. Although well described and extensively used in CBT there is a scarcity of literature on the topic in sport psychology knowledge. We, therefore, aim to provide an introduction to the use of exposure in competitive sport.

Exposure

Exposure has shown well-established efficacy and effectiveness for various phobias and anxiety disorders, for example, social phobia, panic disorder, health anxiety, and obsessive –

1 compulsive disorder (cf. Craske & Barlow, 2008; Franklin & Foa, 2008; Hazlett-Stevens &
2 Craske, 2009; Weck, Neng, Schwind, & Höfling, 2015; Turk, Heimberg, & Magee, 2008).
3 Increasing evidence suggest that various emotional syndromes (e.g., different anxiety
4 disorders) share a common etiology and vulnerability, suggesting that a unified approach in
5 treatment is suitable (Barlow, Allen, & Choate, 2004). In the unified treatment approach,
6 exposure combined with prevention of emotional avoidance and promotion of functional
7 action tendencies (e.g., behaviors leading to better performances), is considered as one of the
8 key elements (Barlow et al., 2011). Because the context for a person's fear and aversive
9 emotional reactions can be both external and internal, exposure can broadly be classified into
10 in vivo ("real life") exposure and interoceptive exposure (towards inner bodily sensations;
11 Hazlett-Stevens & Craske, 2009). In vivo exposure is appropriate when a person fears or is
12 anxious about situations, objects, or cues in their lived environments and tries to avoid these
13 situations by various physical or mental means (Hazlett-Stevens & Craske, 2009). By
14 repeated exposure and habituation to a subjectively threatening stimuli, extinction of the
15 autonomous alarm signal and cognitive changes in the appraisal of the stimuli can be obtained
16 (Sisemore, 2012). Interoceptive exposure involves attention directed towards internal bodily
17 cues (e.g., elevated heart rate, dizziness, increased respiratory rate, staleness, and sensations
18 of fatigue). It is known from modern learning theory that inner symptoms of anxiety or
19 experienced emotional variations can be associated with an intense fear reaction which also
20 induces a change in the behavior to avoid the risk of discomfort (Barlow et al., 2004). By
21 helping the client, through a series of exercises to induce various feared bodily cues, the learnt
22 association between bodily cues and danger can be reduced (Forsynth, Fusé, & Acheson,
23 2008).

24 Although research and clinical experience have supported both in vivo and interoceptive
25 exposure as fundamental methods in various treatments for anxiety syndromes and represents

an unified approach of emotional problems (Barlow et al., 2004; Clark & Beck, 2010), there is almost no literature about this intervention in sport. On the contrary, research in sport psychology literature has focused on strategies to reduce the experienced stress or negative affective state (Rumbold, Fletcher, & Daniels, 2012) instead of exposing athletes to the feared stimuli with mixed results. In their systematic review Rumbold and colleagues suggests that there is a need to find more effective and theoretically substantiated intervention methods that show effect an on sport performance. In the current paper we aim to show how exposure can be integrated as a key method in effective sport psychology for both performance enhancement and relief of distress.

Exposure in practice: A case study of a young skier

The athlete was a 17 year old female cross-country skier. She was considered as a promising elite performer in her age group, but has been underperforming according to earlier performance standards. During the first consultancy session she described that she had being "training too much and too intensely" in the previous pre-season and described symptoms of overtraining syndrome, such as prolonged fatigue (Meeusen et al., 2013). During the previous season's first competition the skier finished last, and this had been an unexpected shock. This result affected her greatly and she felt ashamed. As a result, she became extremely nervous before competitions, and she especially became anxious about uphill segments on the course. This anxiety had continued during the whole season and now with a new season just started she was anxious about the competitions and had avoided one competition due to this anxiety. A problem list was generated during the first session (Willis & Sanders, 2013), where the athlete listed bad performances as part of the problem, but identified the anxiety associated with races as the main psychological problem. As the athlete stated: "I just want to perform like I used to, without this anxiety". The sessions in the treatment are described in Table 1.

1 **Behavioral analysis.** The exposure intervention generally starts with an assessment of
2 the kind of situations and objects that the athlete fears and avoids (Hazlett-Stevens & Craske,
3 2009). The behavioral analysis is conducted in a close collaboration between the consultant
4 and the athlete, where specific situations are carefully studied to find antecedents and the
5 function of the cognitions, emotions, and behaviors involved, as well as the short- and long-
6 term consequences. The behavioral analysis leads to a hypothesis of the problem and the key
7 factors that maintain the covert or overt behaviors present.

8 A common strategy is to develop an exposure hierarchy where a list of situations is
9 arranged from those associated with moderate anxiety and avoidance to highly fearful
10 situations (Craske & Barlow, 2007). These situations are rated on the *Subjective Units of*
11 *Discomfort Scale* (SUDS; Abramowitz et al., 2011). This scale ranged from 0 (no anxiety) to
12 100 (extreme anxiety) and helps the sport psychologist to communicate with the athlete how
13 distressful the exposure might be. Together with the cross-country skier, a list of feared
14 situations was developed and they were arranged from least to most fearful (Table 2). In this
15 case the competitions were the major feared situations but also situations during training with
16 her peers were related to anxiety. At the competition site talking to friends was associated
17 with distress. Thus, anxieties were heightened before the race, but increased as the start
18 approached. The anxiety peaked during uphill segments and when the sense of tiredness and
19 burning sensations in the thighs associated with lactic acid production were experienced
20 (Hoffman, 2002). Having expectancies related to threat is common in anxious individuals and
21 they anticipate future negative events (Clark & Beck, 2010). In this case the athlete started
22 worrying about the race several weeks beforehand. She had also avoided participation in one
23 race due to anxiety, although she was at the event. When experiencing tiredness in the thighs,
24 the cross-country skier's response was to decrease pace in competition, avoid training with
25 her peers at the academy, and avoid uphill sections during training.

The next phase of the behavioral analysis was to study the short- and long-term consequence of the behaviors. In general, short-term consequences ("right now") are the most powerful reinforces for the behavior. In this case, when the skier slowed her pace and avoided the uphill segments, there was decreased anxiety. A scenario like this will most likely lead to hindered sport development and performance over time, but is likely to be heavily reinforced by the short-term anxiety relief, unless the athlete is exposed to the emotions and the situation, and evolves new experiences of the true danger present in the situation.

Similar with a scientific hypothesis, the behavioral analysis may change if new information is unveiled during the intervention process (Farmer & Chapman, 2008). The main purpose of the behavioral analysis is to clarify when certain methods are applicable (Farmer & Chapman, 2008), what precisely the athlete may need to develop and practice, and is the foundation for the intervention conducted.

Psychoeducation. In the next step of the process the sport psychologist helped the cross-country skier learn about the dysfunctional behaviors (i.e., thoughts, feelings/physical sensations, and behaviors), their functions, and the rationale for the intervention. It is our experience that the psychoeducation phase often provides a great relief for the athlete, stemming from their increased understanding that the experienced problem is common in sport, and that there are effective strategies founded in evidence-based research to help overcome the problem (Clark & Beck, 2010). The cross-country skier, similar to many anxious athletes, had developed strategies to avoid the situation or to reduce the uncomfortable emotional response by the use of safety-behaviors (e.g., seeking assurance or comfort from the environment or use of various "calm-down" techniques). It was explained that these strategies were maintaining the problem. Moreover, it was explained to the athlete that anxiety is a learnt response, stemming from the activation of the autonomic nervous system (ANS), to the specific situation or stimuli but, importantly, that anxiety itself is not

normally dangerous although uncomfortable (Abramowitz, Deacon, & Whiteside, 2011). Any covert or overt behaviors adapted to avoid the emotion of anxiety will prevent the athlete from learning about the actual objective danger of the situation/stimuli or developing the ability to execute her sport with various emotions present.

Additionally, the cross-country skier was informed that the intervention would involve, with guidance, exposing her to her fears, starting with a moderately anxiety provoking situation and gradually increasing the difficulty level based on the anxiety hierarchy. The sport psychologist also explained that the athlete would be guided to remain in the situation until she realized that the danger signaled from the ANS was exaggerated. The outcome is that anxiety decreases when the athlete is no longer frightened of her own emotional response. Once athletes understand how their problems have developed and are maintained they often are able to help themselves though (a) doing the behaviors that are needed for their performance and (b) refraining from avoiding unpleasant situations due to symptoms of anxiety. For the treatment to be effective, the cross-country skier's parents and coach were also educated (with her assent) about the rationale for exposure, including how avoidance and anxiety are related, so they could help the athlete and not hamper the treatment (Craske & Barlow, 2007). Although family members and significant others can be important in the early phases of treatment, helping the athlete by encouraging her to pursue behavioral experiments and exposure, they can also become a safety seeking strategy (Clark & Beck, 2010). For example, the first author worked with an athlete where the coach involuntarily become a safety cue for her athlete during warm up, where the athlete felt less anxious when the coach was present and eventually the athlete could not warm up without her coach. In the current case the parents were instructed to help the athlete by initially accompanying her when doing her homework (exposure to feared situations associated with competitions, such as public spaces at the stadium or specific people), but later on letting her do this on her own.

Exposure to physical sensations. One important part of the intervention was to help the athlete understand that the symptoms of anxiety, although perceived as frightening, actually were harmless, which was achieved by exposure for bodily sensations (Clark & Beck, 2010). This method included exercises that made the athlete experience sensations similar to the actual anxiety symptoms including shortness of breath, dizziness, and pounding heart rate. This aim was accomplished through simple, yet effective exercises such as holding ones breath, spinning on a spinning chair, jumping up and down on the spot or hyperventilating (Craske & Barlow, 2007). Often one or two of these symptoms are frightening to the athlete. In this specific case, shortness of breath and dizziness were close to the actual experience. To handle these symptoms in competitions she slowed her pace. These exercises were repeated in the session and after two additional repetitions the level of anxiety decreased from a rating of 90 to 70 (out of 100). Through exposure to harmless physical sensations, the athlete increased her confidence in her ability to tolerate symptoms (Craske & Barlow, 2007). This increased confidence was useful in the in vivo exposure, where the ability to handle the distressful symptoms was important. This exposure can also be used to activate fear schemas (i.e., memories that are associated with fear) and give the athlete a new interpretation of these symptoms (Clark & Beck, 2010). She also told the first author that the experience of lactic acid in the muscles (described as a painful sensation associated with feeling “heavy legs”) was frightening and that she, therefore, had avoided situations that produced these sensations (i.e., skiing uphill). This avoidance behavior had generalized from an experience in competition to training sessions. Homework assignments are a core component of CBT (Robinson, 2009). After this first exposure, it was decided that the athlete should try to hold her breath and clock her progress during three short exercises until the next meeting a week later.

Exposure in vivio. After having been exposed to bodily sensations, an *in vivo* exposure was planned. For exposure to be effective, two requisites must be evident (Clark & Beck, 2010). First, the exposure must activate fear schemas. This means that the athlete must be moderately anxious during the exposure. Second, the exposure must present disconfirming evidence of the fear schema. That means that the athlete needs to experience an increase in anxiety and eventually realize threat will not happen. As mentioned, a hierarchy of anxiety provoking stimuli or situations was developed in collaboration between the athlete and CBT-sport psychologist (see Table 2). Exposure is often graded, from the least unpleasant to the most feared stimuli, and the sport psychologist and athlete work their way up the list of objects or situations. The collaboration between athlete and sport psychologist is important in all CBT treatment (Beck et al., 1979), but perhaps even more before exposure as this intervention includes increasing anxiety and discomfort rather than decreasing. Another aspect is the athlete's active involvement, as perceived control in what will happen is extremely important (Antony & Swinson, 2000). Even if the sport psychologist could help the athlete to challenge herself, the client needed to be assured that she would not be forced to do anything she did not want to do. Based on the behavioral analysis, we decided together to expose the athlete to uphill skiing. The first author, being a former cross-country skier did the exposure and after repeating the rationale for the treatment placed himself at the top of the hill and the athlete started an interval bout. After approximately half the uphill, the athlete stopped; having intense anxiety symptoms (she rated 100 on 1-100 scale). She was then instructed to focus on her breathing and when she was calm again the procedure was repeated three times. The second time she came 75% of the way up the hill and the third time she was able to ski the whole uphill, but also with markedly lower symptoms, she rated 80 on the second time and 60 on the third (1-100). After this she was instructed to ski uphill and to withhold her breath as this was one of the most feared symptoms. During the three skiing

intervals and holding her breath, the length of the interval doubled and the anxiety level decreased from 80 to 50 on a 100 self-rating scale. A 50% reduction in anxiety is considered to be a successful exposure (Taylor, 2006). The homework assignment involved repeating the intervals twice the next week and to complete all uphill segments during long slow distance training. Sometimes the effects can be very direct and only one session is enough (Öst, 1996), but to be sure we used repeated sessions to reinforce the effect (Clark & Beck, 2010).

Maintenance and relapse prevention. The next session included a review of the homework assignment (this is a common component of all CBT sessions; Barlow et al., 2011). The athlete had performed the planned assignments with great progress. During the interval sessions she had performed five repetitions and had lowered her anxiety even further (rated 30 on the 0-100 scale of anxiety) and she now did not perceive these sessions as troublesome. During the long slow distance sessions she had used behavioral testing of her fears of having panic attacks when she was training with her friends at the ski academy and had not avoided any uphill segments. In this last consultancy session, a plan for how to maintain the new skills was developed and we developed a relapse management program (Westbrooke et al., 2010). This planning included how the client could remember the skills she had learned, prepare for potential future problems, and ways to handle them. Furthermore, a booster session is often scheduled to check how things are proceeding (Butler, Fennell, & Hackmann, 2008), and in this case was conducted after two months. This session included an update and a discussion of how the athlete could continue her work. The athlete was in full training and had maintained the planned work from the last session.

Evaluation of the intervention. Prior to the intervention, the athlete had started to avoid specific situations including competitions, friends at the competition site, training with her friends, and skiing uphill during training. After the intervention the athlete adopted new behaviors when experiencing situations that had been associated with anxiety. She stopped

1 avoiding training with friends and could perform uphill interval training without experiencing
2 anxiety. She also participated in competitions and socializing with friends in association with
3 skiing competitions. There were also decreases in perceived anxiety ratings pre to post. The
4 main goal for the athlete, participating in sport with the focus on performance, and not on
5 anxiety, was met and thereby indicating the end of the interventions (Wills & Sanders, 2013).

6 **Concluding Remarks**

7 Cognitive Behavioral *Therapy,* or in many cases in sport, Cognitive Behavioral
8 *Training* (Gustafsson & Lundqvist, 2016)*,* is based on helping the athlete/client practice using
9 skills that will enhance both performance and well-being. In this case we have exemplified
10 how the CBT-framework and exposure can be used to assist athletes to manage anxiety and
11 embrace anxiety provoking situations. Based on research in clinical psychology and our
12 experience, we claim that anxiety related problems and avoidance are major obstacles for
13 performance enhancement and for these situations exposure can be effective for athletes
14 (Clark & Beck, 2010).

15 If exposure appears simple, this is a misjudgment (Clark & Beck, 2010). To be able to
16 practice effective exposure interventions, proper training and education is required.
17 Knowledge in behavioral psychology (cf. Farmer & Chapman, 2008), and the foundations and
18 principles of exposure is necessary (e.g., Abramowitz et al., 2011). In addition, we
19 recommend working initially under supervision from an experienced colleague. Common
20 problems that occur are, for example, avoidance, which is common in all anxiety disorders
21 (Hembree & Cahill, 2007). The natural response when encountering a threatening situation or
22 object is for the athlete to try and escape. It is important then to remind the athlete that
23 avoidance is maintaining the problem, although it gives a short-term relief of anxiety. Another
24 problem is underengagement. This means having problems with engaging in the emotional
25 aspect of the fear structure. One way to handle this is to repeat the rational for exposure and

validate the fear the athlete might have. For example, consider a team sport athlete who is afraid of showing her or his weaknesses in strength and conditioning testing and therefore avoids these tests. This athlete needs to understand that avoiding these situations not only leads to a possible lack of monitoring of performance and training progress but also leads to maintaining the anxiety related to these situations and that he or she must expose himself/herself to these emotions.

Also, there are contraindications to using exposure. There are situations in sport that are risky, where fear is natural and protective. This includes sports like road cycling, mountaineering, and downhill racing. In these situations fear is something that the athlete must accept and adapt to if they want to continue in their sport. Furthermore, individuals with thought disorders, such as psychosis should not be treated with exposure (Hazelett-Stevens & Craske, 2009). Medical aspects also need to be taken into consideration. This, for example, includes avoiding asking asthma patients to hold their breath during exposure to bodily sensations or exposing individuals with low immune function to germs when treating for obsessive compulsive disorder (Olatunji, Deacon, & Abramowitz, 2009). In general, athletes are healthy individuals, but it is always advisable to have a physician to consult with if necessary (in the current study the athlete was in a national talent program and she had regular medical examinations). A good question to ask is: do at least some people ordinarily confront the situation/stimulus in the course of everyday life without adverse consequences? (Olatunji et al., 2009, p. 176). Sometimes special considerations must be taken with athletes and the stress they operate under, for example, following guidelines for ordinary healthy athlete dietary habits.

In terms of evaluation of the intervention, more objective measures can be use, such as self-report measures (e.g., Sport Anxiety Scale – 2; Smith, Smoll, Cumming, & Grossbard, 2006). This should especially be considered for applied research. In practice, we generally use

1 subjective ratings (e.g., SUDS; Abramowitz et al., 2011), which we find very useful and
2 sufficient for the purpose. In addition, the most powerful evaluation is on a behavioral level,
3 can the athlete perform the targeted behaviors that he or she have described as valuable (see
4 Tkachuk, Leslie-Toogood, & Martin, 2003). In this case the athlete could perform the whole
5 uphill interval after the intervention, started training with peers and participated in
6 competitions. Thus increased the behavioral repertoire is in many cases of greatest
7 importance.

8 In summary, we have presented how exposure can be integrated in elite and
9 competitive sports. We hope that this paper can inspire sport psychologists in their continued
10 professional development and also stimulate sport specific research on exposure. As the
11 method has extensive support for many emotional disorders, and is a fundamental part of CBT
12 interventions, we are believe that exposure is a valuable addition to the traditional methods
13 used by sport psychologists.
14

1 **References**

2 Abramowitz, J. S., Deacon, B. J., & Whiteside, S. P. (2011). *Exposure therapy for anxiety:*
3 *Principles and practice*. Guilford Press.
4 Antony, M. M.,& Swinson, R. P. (2000). *Phobic disorders and panic in adults: A guide to*
5 *assessment and treatment.*Washington, DC: American Psychological Association.
6 Barlow, D. H., Allen, L. B., & Choate, M. L. (2004). Toward a unified treatment for
7 emotional disorders. *Behavior Therapy, 35*(2), 205-230. doi:10.1016/S0005-
8 7894(04)80036-4
9 Barlow, D. H., Farchione, T. J., Fairholme, C. P., Ellard, K. K., Boisseau, C. L., Allen, L. B.,
10 & May, J. T. E. (2011). *Unified protocol for transdiagnostic treatment of emotional*
11 *disorders: Therapist guide*. New York: Oxford University Press.
12 Butler, G., Fennell, M., & Hackmann, A, (2008). *Cognitive-Behavioral Therapy for anxiety*
13 *disorder: Mastering clinical challenges*. New York: Guilford Press.
14 Clark, D. A., & Beck, A. T. (2010). *Cognitive therapy of anxiety disorders: Science and*
15 *practice*. New York, NY; Guilford Press.
16 Craske, M. G. (2010). *Cognitive behavior therapy.* Washington, DC: American Psychological
17 Association.
18 Craske, M. G., & Barlow, D. H. (2007). *Mastery of your anxiety and panic: Therapist Guide*
19 (4th ed.). New York: Oxford University Press.
20 Craske, M. G., & Barlow, D. H. (2008). Panic disorder and agoraphobia. In D.H. Barlow
21 (Ed.), *Clinical Handbook of Psychological Disorders* (4th ed.). NY: Guilford Press.
22 Farmer, R. F., & Chapman, A. L. (2008). *Behavioral interventions in cognitive behavior*
23 *therapy: Practical guidance for putting theory into action*. American Psychological
24 Association.

1 Forsynth, J.P., Fusé, T., & Acheson, D.T. (2008). Interoceptive exposure for panic disorder.
2 In W. O´Donohue & J.E. Fisher (Eds.), *Cognitive behavior therapy. Applying*
3 *empirically supported techniques in your practice* (pp. 296-308). Hoboken, NJ: Wiley.
4 Franklin, M.E., & Foa, E.B. (2008). Obsessive-compulsive disorder. In D.H. Barlow (Ed.),
5 *Clinical Handbook of Psychological Disorders* (4th ed.). NY: Guilford Press.
6 Gustafsson, H, & Lundqvist, C. (2016). Working with perfectionism in elite sport: A
7 Cognitive Behavioral Therapy perspective. In A. P. Hill (Ed.), *The psychology of*
8 *perfectionism in sport, dance, and exercise.* London: Routledge
9 Hazlett-Stevens, H., & Craske, M. G. (2009). Live (In vivo) exposure. In W. T. O'Donahue,
10 & J. E. Fisher (Eds.), *General principles and empirically supported techniques of*
11 *cognitive behavior therapy* (pp. 407-413). Hoboken, NJ: Wiley.
12 Hoffman, J. (2002). *Physiological aspects of sport training and performance*. Champaign, IL:
13 Human Kinetics.
14 Hofmann, S. G., Asmundson, G. J. G., & Beck, A. T. (2013). The science of cognitive
15 therapy. *Behavior Therapy, 44*(2), 199-212. doi:10.1016/j.beth.2009.01.007
16 Olatunji, B. O., Deacon, B. J., & Abramowitz, J. S. (2009). The cruelest cure? Ethical issues
17 in the implementation of exposure-based treatments. *Cognitive and Behavioral*
18 *Practice*, *16*(2), 172-180. doi: 10.1016/j.cbpra.2008.07.003.
19 Öst, L. G. (1996). One-session group treatment of spider phobia. *Behaviour Research and*
20 *Therapy*, *34*, 707-715. doi: 16/0005-7967(96)00022-8
21 Robinson, P. (2009). Putting it on the street: Homework in cognitive behavioral therapy. In
22 W. T. O'Donahue, & J. E. Fisher (Eds.), *General principles and empirically supported*
23 *techniques of cognitive behavior therapy* (pp. 407-413). Hoboken, NJ: Wiley.

Rumbold, J.L., Fletcher, D., & Daniels, K. (2012). A systematic review of stress management interventions with sport performers. *Sport, Exercise, and Performance Psychology, 1*(3), 173-193. doi: 10.1037/a0026628

Sisemore, T.A. (2012). *The clinician's guide to exposure therapies for anxiety spectrum disorders. Integrating techniques and applications from CBT, DBT, and ACT.* Oakland, CA: New Harbinger Publications, Inc.

Smith, R. E., Smoll, F. L., Cumming, S. P., & Grossbard, J. R. (2006). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. *Journal of Sport and Exercise Psychology*, *28*(4), 479.

Taylor, S. (2006). *Clinician's guide to PTSD: A cognitive-behavioral approach.* New York: Guilford Press.

Tkachuk, G., Leslie-Toogood, A., & Martin, G. L. (2003). Behavioral assessment in sport psychology. *Sport Psychologist*, *17*(1), 104-117.

Turk, C.L., Heimberg, R.G., & Magee, L. (2008). Social anxiety disorder. In D.H. Barlow (Ed.), *Clinical Handbook of Psychological Disorders* (4th ed.). NY: Guilford Press.

Weck, F., Neng, J.M.B. Schwind, J., & Höfling, V. (2015). Exposure therapy changes dysfunctional evaluations of somatic symptoms in patients with hypochondriasis (health anxiety). A randomized controlled trial. *Journal of Anxiety Disorders, 34, xx-xx.*

Westbrook, D., Kennerley, H., & Kirk, J. (2010). *An introduction to cognitive behaviour therapy: Skills and applications* (2nd ed.). London: Sage.

Whelan, J.P., Mahoney, M.J., & Meyers, A.W. (1991). Performance enhancement in sport: A cognitive behavioral domain. *Behavior Therapy, 22,* 307-327.

Willis, F., & Sanders, D. (2013). *Cognitive behaviour therapy: Foundations for practice* (3rd ed.). London: Sage