

Research Critique

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Article 1

Mesagno, C., Tibbert, S. J., Buchanan, E., Harvey, J. T., & Turner, M. J. (2020). *Irrational beliefs and choking under pressure: A preliminary investigation* Informa UK Limited.
doi:10.1080/10413200.2020.1737273

Purpose

The first article researched cognitive precursors that produce levels of anxiety where choking under pressure “choking” occurs and is defined in this article as “being a considerable skill performance decrement in an anxiety-producing situation, when that same skill is performed at a “normal” standard in low pressure situations” (Beilock & Gray, 2007; Geukes et al., 2013; Mesagno & Hill, 2013). Mesagno et al., (2020) proposed to study if irrational beliefs (IBs) defined as “unreasonable, unfalsifiable, and ridged thoughts that lead to an inflexible lack of acceptance for non-preferred situational outcomes” (Davies, 2008) are cognitive antecedents that can lead to choking in athletes. The self-presentation model (Mesagno et al., 2011) shows personality characteristics such as being overly aware of negative evaluation by others and worrying over making a good impression can lead to heightened pressure on an athlete to adequately perform. “Chokers” have a low belief in their ability to portray a positive athletic persona and instead focus on distracting thoughts such as avoiding disapproval from coaches, teammates, and others of importance. The athlete holds on to these strong unwavering beliefs making it difficult to keep an open mind to an alternative outcome. Understanding the possible interactions between IBs that influence anxiety and sport performance is important due to sporting environments being outcome-focused which can enable the athlete’s attention to shift under high-pressure situations. This can ultimately lead to an increase in anxiety and a decrease in overall performance. The study’s aim was to research if IBs influence anxiety and

performance under high-pressure situations, making it an area of importance to mental health professionals as this is typically the environment athletes perform in.

Methods

Thirty-five male Australian football players with a mean age of 24.49 years of age with five years of playing experience in the semiprofessional competitive level participated in the study. Cones were positioned in various kicking positions and points were awarded based on the players proximity to reaching the cones after kicking the ball. The players started with kicking attempts in low-pressure situations and the researchers gradually added in different manipulations for increasing anxiety effects to simulate high-pressure situations. The Irrational Performance Beliefs Inventory (iPBI) was used to measure IBs in a performance domain by participants rating questions based on demandingness, awfulizing, and low frustration tolerance based on a Likert scale. A Mental Readiness Form-3 (MRF-3) was used to measure state anxiety using a visual analog scale for rating sensations of relaxed/tense, calm/worried, and confident/not confident, and participants placed a mark on each line to illustrate how they were feeling during a specific moment. Cognitive anxiety, somatic anxiety, and performance were measured with either low- or high-pressure situations, and IBs were measured and analyzed.

Results

Results from this study conflicted with current theories in that IBs may positively influence performance in low-pressure situations and decrease performance with increasing IBs under high-pressure situations. These results show that athletes who may “choke” have different reactions to pressure than other individuals such a “underperformers” or “clutch” performers. All

athletes experienced similarly increased anxiety under the high-pressure situations regardless of IBs levels.

Discussions and Conclusions

“Chokers” with higher IBs performed more successfully when little to no pressure was presented, however, under increased pressure chokers with higher IBs had a greater decrease in performance from low- to high-pressure. The IBs relating to a perceived pressure (threat or challenge) were shown to exaggerate a perceived threat if it was already occurring in the situation. Due to the small sample size and conflicting results compared with larger studies, the researchers suggest more data is needed before applying these results. However, based on this information, a sports psychologist can understand the importance of keeping an open mind instead of thinking that all IBs are false, illogical, or unhealthy for goal achievement. An athlete can develop a “double think” mental skill belief for reaching performance goals as long as these IBs are recognized as false and illogical. However, if an athlete’s goal is for a healthy life with little mental discomfort, then focus should remain on reducing IBs.

Article 2

Hussey, J., Weinberg, R., & Assar, A. (2020). Mindfulness in sport: An intervention for a choking-susceptible athlete. *Case Studies in Sport & Exercise Psychology*, 4(1), 1-10.

Retrieved from: [link](#)

Purpose

The case study conducted by Hussey et al., (2020) researched possible prevention efforts for choking susceptible (CS) athletes by focusing on levels of trait anxiety, self-consciousness, and coping styles. Mesagno et al., (2013) defines choking as “an acute and considerable decrease in skill execution and performance when self-expected standards are normally achievable, which

is the result of increased anxiety under perceived pressure.” The case study subject self-identified as CS and competed on a high-pressure collegiate track-and-field team. A sports specific mindfulness intervention was implemented to potentially reduce levels of trait anxiety and self-consciousness while altering the athletes coping style. These factors are hypothesized to increase performance, decrease CS, and coupled with increasing mindfulness levels, reduce the likelihood of choking in future performances. The goal for athletes in high-pressure situations is to control anxiety levels and attention which would decrease the risk of choking.

The researchers looked to mindfulness as it is a nonjudgmental observation of the present moment while focusing on the task at hand. If a CS athlete can use an attitude of acceptance the intense self-focus felt in CS athletes can possibly be alleviated. With mindfulness the athletes’ focus would be on task-relevant cues and not on attentional distractions or anxiety during high-pressure situations. The researchers wanted to investigate if mindfulness would increase overall performance and decrease task-irrelevant thoughts, concerns over mistakes, self-doubts, and competitive anxiety in an CS athlete.

Methods

This single-subject case study with dependent variables of trait anxiety, self-consciousness, and coping styles utilized a mixed-methods approach with data triangulation to add validity to the results. The participant was selected based on Mesagno et al., (2008) CS criteria from the Sport Anxiety Scale (SAS) for measuring multidimensional competitive trait anxiety, the Self-Consciousness Scale (SCS) for measuring dispositional self-consciousness, and the Coping Style Inventory for Athletics (CSIA). The Mindfulness Inventory for Sport (MIS) was implemented at baseline to measure levels of trait like sport mindfulness scores but was not

used in the selection criteria. One athlete *James scored in the 75th-100th percentile on all three tests and based on Mesagno et al., (2008) criteria, labeled him a CS athlete. The Mindful Sport Performance Enhancement (MSPE) program (Kaufman et al., 2006) was utilized to teach athletes how to apply mindfulness skills to sport with consistent practice of mindfulness exercises (diaphragmatic breathing, body scanning, mindful yoga, sitting meditation, walking meditation, and sport-specific meditation) that was implemented over a six-week period. The sessions were conducted weekly for 90 minutes, each session introduced a new mindfulness technique to the athlete, and the exercises were adapted to fit track and field needs when possible. Three assessment phases were used to collect data at the baseline assessment and interview, during the post-intervention questionnaire assessment, and at a follow-up post intervention performance assessment and interview. The Mindfulness-State Assessment test monitored changes in state mindfulness (acceptance and awareness levels) throughout the intervention. A practice logbook was used to keep track of home practice with the time, amount, frequency, and documented experiences from the athlete.

Results

The baseline score for *James was in the 75th-100th percentile for all three CS measures and after the study was conducted scores fell to the 25th-50th percentile which removed *James from the CS category. The mindfulness score had increased from a baseline of 4.1 to 5.2 and *James's mindfulness practice log reported 76.6% completion rate of homework sessions which totaled the practice time at 325 minutes.

Discussions and Conclusions

The qualitative analysis from *James's interview after the competition of the intervention resulted in feelings of a greater ability to cope with anxiety, increase in focused attention on

relevant cues, and an ability to stay in the present moment without focusing on negative or irrelevant thoughts. Although the study did not focus on performance, *James threw a personal record during the intervention and noted the ability to exhale tension through breathing, viewed anxiety positively, was less critical of poor performance, and calmer during competitions. The article suggested that a longer follow-up (more than 6 months post-intervention) should be tested for solidity of the program and additional studies to expand data for further validity of the results are needed. Another factor is in the importance of adhering to the mindfulness training program and further studies on motivational strategies would be beneficial. Athletes can also learn to integrate mindfulness skills into their current routines while still practicing and applying the skills learned.

Summary Page

To compare and contrast the two articles I first looked at the different approaches the researchers took regarding choking, Mesagno et al., (2020) researched the cognitive antecedents that lead athletes to choke and the Hussey et al., (2020) case study researched a prevention method for choking through mindfulness training. IBs were chosen as precursors by Mesagno et al., (2020) due to CS athletes having increased anxiety during high-pressure situations and Hussey et al., (2020) chose mindfulness as CS athletes tend to have increased levels of trait anxiety. The Mesagno et al., (2020) study viewed focus distractions as a cause for choking and Hussey et al., (2020) chose mindfulness training for attentional control and to enable the CS athlete to focus on the task at hand. Mindfulness training can help an athlete focus on the present moment instead of on distracting IBs (increased concern for mistakes made and focusing on self-doubts). Both studies had a small sample size (N=35 and N=1), single sport (football and track and field), and all subjects were male. The Mesagno et al., (2020) article simulated a high-

pressure situation through increasing manipulations during the test, however, the Hussey et al., (2020) article was able to capture the athlete in a real-life competitive environment. Both studies utilized a substantial series of tests for data; MIA, SCS, CSIA, iPB, MRF-3, and MSPE. The Mesagno et al., (2020) research conflicted with their hypothesis and the Hussey et al., (2020) research closely showed results that were hypothesized. Both articles suggested keeping an open mind in viewing IBs (in low-pressure situations) and mindfulness as beneficial for performance enhancement. Both studies suggested the need for further research as the Mesagno et al., (2020) study's results contradicted current theories regarding IBs and their influence on performance and the Hussey et al., (2020) article showed promising results, however, there is need for diversity in both cases.

Personal evaluation of project

The two articles together showed an interesting perspective in learning about choking in first understanding the precursors that can cause choking and then contemplating prevention methods. Performance is important not only for an outcome measure in sport but also for an athlete to learn and grow as individual. The importance of creating a deeper understanding of “choking” is necessary as one incident can cause lasting negative effects on an athlete's performance and well-being. Further research into when choking traits start to occur in athletes can help prepare performance enhancing habits especially if this begins in youth sports. If these patterns start later in life during highly competitive years, there would be an increased need for interventions to aid athletes that are CS as these traits can become ingrained and harder to change.

It is a difficult task to recreate competitive pressure situations and Mesagno et al., (2020) first used a silent audience comprised of teammates, preceded to video camera being present, and

then added a kicking competition for a \$50 grocery voucher. The Hussey et al., (2020) article was able to use results from real competitions and it would be advantageous if IBs can be studied in real competitions instead of recreating pressure situations.

If mindfulness training is taught to an athlete that uses IBs in low-pressure situations for performance enhancing purposes, could mindfulness hinder performance as the athlete would adopt a nonjudgmental approach to IBs instead of for performance enhancement? More research would be needed for these athletes and situations. Hussey et al., (2020) recommends bringing in a “mindfulness expert” for helping run the mindfulness sessions, however, this can seem unrealistic within most organizational budgets. This can put pressure on professionals to be creative in ways to integrate mindfulness training into practice, so athletes and organizations do not feel overloaded. *James showed success with mindfulness training, and it would be beneficial to research further into the amount of time and consistency that is needed to see such results. Would the amount *James logged constitute the minimal or an appropriate amount of effort to see benefits for every athlete? Also, due to the importance of an athlete adhering to the mindfulness training, more research is needed to find ways to motivate athletes to utilize the training outside of sport sessions and possibly adding a Self-determination theory (SDT; Ryan & Deci, 2002) to the qualitative data would be beneficial for further understanding into the motivation continuum. An additional study can combine Albert Ellis’s Rational Emotive Behavior Therapy (Ellis & Dryden, 1987) and mindfulness training for an enhanced perspective into “choking” for CS athletes.

Overall, these two research articles sparked critical thinking on the topics of choking, IBs, and mindfulness training regarding optimal performance in and outside of sport.