Mental Skills Training Curriculum: Optimizing Performance

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Week One Mental Skills Training: Developing an Athletic Identity.

Introduction

Athletic Identity is an important concept as it "encompasses our goals, our interests, and requires our commitment" (Williams & Krane, 2021, p.542), and in sports, how much the athlete identifies with their sport. Identity is at the heart of who the athlete is and explains why they are willing to do what they do. Research shows one thing is obvious. A strong athletic identity is essential for success and contributes to athletes succeeding in their support. A strong athletic identity is healthy when athletes stay focused on their goals and commit 110% of what others are unwilling to do. However, research studies suggest that nearly all athletes with this strong athletic identity struggle the most when facing an injury or retirement (Horn & Smith, 2017). At this time in an athlete's career, the strong and healthy identity suddenly becomes considered "unhealthy." Indeed, Horn & Smith (2017) write that the loss of athletic identity is likened to a loss of sense of self and is considered to be a "highly traumatic" event (p. 65). So, with this inevitable end in mind, how can we help athletes with protective factors?

Why Motivating Factors Matter

In *The Pursuit of Excellence*, Orlick (2008) examines how one's motivational orientation impacts the pursuit of excellence and outcomes. Pursuing excellence is characterized by an intrinsic motivation that focuses on personal growth, mastery of skills, and continual improvement. Inherent motivation creates resilience, long-term satisfaction, and a deeper engagement with the actual act of the sport itself. In contrast, pursuing outcomes is often driven by extrinsic motivation and focuses on achieving specific results. Winning and rewards become the athlete's focus, which can negatively impact an athlete as their self-esteem can become contingent on achieving these external markers of success. Pursuing excellence is more self-fulfilling and may lead to more extended sports engagement (Orlick, 2008).

Multiple risk factors exist for an athlete to develop an unhealthy athletic identity that may negatively impact their life. The main risk factor is exclusivity of identity; the athlete has no aspects that comprise their self-concept. They view themselves as exclusively an athlete. Worksheet 1.1, attached, asks athletes to name three important things they do outside of sports, whom they call to get a break from sports, and if that person would be there for them if they quit competing tomorrow. It also asks them to develop a simple self-care plan, which could be a protective factor. Conversations regarding the development of athletic identity and the importance of having other interests and strengths should occur during adolescence, as this is when athletic identity develops more strongly (Edison et al., 2021).

Positive Factors

In a study that looked at protective factors for dealing with stressors, Sarkar and Fletcher (2014) identified "the five main families of psychological factors (viz. positive personality, motivation, confidence, focus, perceived social support) that protect the best athletes from the potential negative effect of stressors." Studies do show that social support is indeed a protective factor (Edison et al., 2021). Our job as CMPCs is to teach athletes about the importance of social support and the other four protective psychological factors.

Mental Skills Training (MST) is grounded in the principle that psychological factors are crucial in achieving peak performance in sports and other high-pressure environments (Williams & Krane, 2019). MST focuses on developing skills such as focus, self-talk, goal setting, imagery and visualization, mental toughness, and stress/emotional regulation, all skills that can be taught, which are essential for athletes to harness their full potential. Athletes are introduced to these skills in various manners, usually in a group setting with a coach present (Williams & Krane, 2019), and worksheets or homework are often used to allow athletes to practice these skills. A

curriculum that uses a structured approach will ensure that athletes not only understand these concepts but are given the time to practice them so they can integrate the skills into their training and competitive practices, laying the groundwork for the lifelong use of mental skills during athletic training and competition (Williams & Krane, 2019).

Conclusion

The concept of sports ethics emphasizes values like dedication, sacrifice, and the pursuit of excellence (Hughes & Coakley, 1991), and these intersect with MST. MST fosters a disciplined mindset, aligning with these ethical principles by teaching athletes how to consistently apply themselves, handle setbacks positively, and strive for continuous improvement in their performance. MST training encourages athletes to embody the spirit of sports ethics by optimizing their physical abilities and developing strong character traits such as resilience, integrity, and persistence. However, sports ethics may not be entirely positive. It may be hurting athletes in a way because of the nearly impossible achievement expectations for athletes, creating an environment where athletes will do nothing to stop at being the best, often pushing past physical limits, enduring pain and suffering, and even participating in illegal activity, i.e., doping to achieve more impressive results (Giannone et al., 1991). Athletes need Sports and performance psychology advocates and CMPCs who understand the real pressures athletes face and encourage them to build a resilient and positive athletic identity that can withstand the negative pressure of sports ethics. If we can use MST to teach athletes how to cope with the negative side of sports ethics, then perhaps there is a greater chance they achieve a healthy athletic identity, one that is not rooted in and motivated by outcomes but rather one that is driven by the pursuit of excellence and enjoyed with the larger framework of a positive, happy and

(slightly) more balanced lifestyle. Achieving this balance while focusing on the pursuit of excellence will be the foundation of this MST curriculum.

Week Two Mental Skills Training: Preparation and Performance Routines

Preparation and Performance Routines

Research has shown that, without a doubt, preparation and readiness are most positively impacted by having routines in place for pre-, during, and post-performance activities. The impact of having a routine is that it mentally readies the athlete and/or team to learn how to achieve and maintain a state of optimal performance, or what is often referred to as flow. Achieving flow is not as simple as an athlete going out and doing their best. It requires careful planning and execution, so much so that the athlete can rely on the routine, and their body moves in a state of automatic execution. To achieve this state of optimal mental and physical performance, routines are the key to success. While many articles and books have been written about flow and how to achieve it, this chapter focuses on the basics of routine planning and how specific steps can help athletes in their preparation and execution.

Pre-Performance Routines

Pre-game routines involve athletes engaging in specific task-relevant thoughts and actions before their performance because it helps them maintain control under pressure (Mesagno & Mullane-Grant, 2010). If athletes can retain control over their minds and bodies, they can achieve better flow because their stress is controlled. Pre-game routines are not just pertinent in the few hours before or on the day of the game but can be beneficial in the days leading up to the game or performance event. Orbach & Blumenstien (2022) noted that mental load and emotional tension can increase during the days leading up to the competition. The goal of the CMPC with a Pre-Performance Routine (PPR) is to help the athlete manage this inevitable anxiety. This state can occur when distraction increases and focus wanes, which causes the athlete to fail to focus on the relevant task (Mesagno & Mullane-Grant, 2010). Therefore, the

pre-performance routine aims to keep the athlete in a state of task focus while decreasing their mental load, tension, and distraction. This is no small task, indeed.

In the days and weeks leading up to the event, the athlete and team can prepare in many ways. These various types of preparation are listed here and can vary widely, depending on the sport or type of performance. Please note that the PPR below refers to an athlete but can easily be translated to accommodate a team.

In the Month Ahead: Procure a Schedule for the Competition. Identity where the competition will be held. Identify what time the athlete's specific performance, tryout, or event is. If there will be a crowd at the performance and the athlete is not used to performing in front of a crowd, assemble a small crowd (if possible) over the next month and have the athlete practice their performance. This type of competition day preparation is called Simulation and " replicates the competition environment in training situations" (Jackson & Csikszentmihalyi, 1999). While simulation may seem simplistic, it has been shown to improve performance greatly. Develop a daily pre-performance plan involving nutrition, hydration, mantras, meditation, and imagery if the athlete is advanced enough in their mental skills to utilize such a skill. Work with the athlete to develop a mantra that they are comfortable with and stress the importance of beginning to say this mantra regularly.

The week ahead of the performance: Have the athlete visit the site of the upcoming competition and walk around to become familiar with the layout. If appropriate, an imagery exercise can be done at the site. Obtain the weather report if the event is outside, and develop a plan based on the forecast and contingency plans if it looks like rain or weather outside of the normal conditions for performance. Develop a plan for the event day, specifically when they arrive at the competition's site. With the help of the CMPC, athletes should determine whether

they want to use music, light warmups, singing, meditation, etc, to help them stay task-focused and keep anxiety low.

The day and night before the event: The night before the competition, have athletes lay out what they will wear, pack food and drinks, and have everything ready to go when they wake up. Have them pre-plan breakfast the night before; meals for the day before should be planned a week in advance.

The day of the event: All activities should be completed as if it is a training day. Normal routines are followed as much as possible. When anxiety starts to spike, the athlete can be instructed to use their mantra, meditation, and imagery. When athletes arrive at the competition site, they are to engage in the pre-planned activities determined a week ago. These rituals have been shown to get the athlete in the "zone" (Orbach & Blumenstein, 2022). Finally, the athlete can switch to their in-performance routines when it is performance time.

All of these Preparatory Routines (PR) will "direct the athlete's attention, help regulate psychological and physiological stress responses to stress, and allow motor processes to run with minimal conscious interference" (Orbach & Blumenstein, 2022). As mentioned above, if achieved, these states are conducive to the athlete reaching a sense of effortlessness that is considered flow.

In Performance Routines:

Task-Specific Goals: Routines during performance are just as important to the athlete's mental state as all of the PPR. Jackson & Csikszentmihalyi (1999) write that only a "highly disciplined athlete can keep the focus tuned into their performance for the duration of the event"(p.114), but this is indeed the goal. Skills that can be utilized during the performance are Task Goals, i.e., specific challenges of the event or the movement/activity that is coming next.

Refocusing, which is a skill that allows the athlete to return their performance to the task at hand, requires the athlete to stay aware of their body, which keeps them present. Most of these Performance Routines require an ability to stay in the present moment and focus on their performance. To do this, athletes can be taught cue words, trigger words, mantras, or even visual cues that remind them to focus immediately on a bodily sensation, putting their focus back where it needs to be: in the present moment (Jackson & Csikszentmihalyi, 1999, Mack, 2010).

Specific Action Routines: These routines refer to a very specific moment when an athlete initiates a cue, thought, or word that is completed immediately before the athlete performs their trained movement. An example of in routine cues with familiar teams would be when a quarterback yells "hut" to indicate his center should snap the ball to him. Another team-oriented action-specific cue is when a pitcher looks at his catcher, and the catcher signals him what pitch to throw. For a high jumper, this particular action routine would be counting their steps as they run up to the bar, which cues them when to jump. An even more specific example of an action cue could be a golfer who looks down the fairway and immediately before the ball takes a specific number of breaths or closes their eye and visualizes the club hitting the ball in the center of the golf ball All these action particular routines can be developed with the athlete after looking at their strengths and weaknesses, which will help them identity their goals. In *Mind Gym*, Mack (2010) states that to be present, an athlete has to have both eyes on the puck, ball, or basket- the "target." All attention should be on the target. Performance routines will allow the performer the extra moment pre-stroke, pre-pitch, or before putting their hands on the keyboard to shift both their eyes and their entire attentional focus on the target.

A Backup Plan: As all athletes and performers know by experience, things do not always go according to plan. A backup plan will allow the athlete to return to the planned PR. By

creating a backup plan to prepare for an inevitable hiccup in the best plaid plans, athletes are ensured they are ready, and this will help them maintain control under pressure (Mesagno & Mullane-Grant, 2010). As stated earlier, if the athlete can maintain control over their mind and body, the preparation manages the stress when something unexpected occurs, and the performance is salvageable. A backup plan is more difficult to prepare in a specific sense, as every worst-case scenario cannot be considered. However, some steps can be taken to ensure the athlete knows how to recover. If a gymnast loses her balance and falls, rather than letting her mind race and lose focus, she can be taught to have the backup plan of closing her eyes for two seconds, taking two deep breaths, and returning to her routine. If a team misses a pass during an important play, rather than letting attitudes and morale crash, the captain can have a phrase he shouts to the team, which is designed to keep them focused and concentrating on the task at hand the very next play. An effective backup plan is intended to return the focus of a performer to their bodily sensations, the task at hand, and the present moment. An athlete's best performance occurs when they are in the present moment (Jackson & Csikszentmihalyi,1999; Mack, 2010) so all routines should be designed with this in mind, including a backup plan.

Post-Performance Routines.

Post-Performance Routines: An intentional routine after a performance is just as important as the pre-and during routines. Immediately after a performance, an athlete has the most body and heightened awareness of mental state. They can make note of these and relate them to the level and quality of the performance, making somatic connections and taking note of these. Post-performance is an ideal time to consider the enacted routines and their efficacy. If they are determined to be ineffective, the athlete can take mental notes and share this with a coach or CMPC during their next training session. Orlick (2008) notes that all performance

insights are helpful and can be used to improve the next session's performance. An example of a post-performance routine would be a coach debriefing with a team following a game, regardless of the outcome. An individual performer could engage in a brief stretching routine that would cool their muscles down and allow them to move from flow to a less concentrated state. Any athlete or performer could complete a body scan and thank their body and mind for their abilities, which allows them to complete the performance with the absolute connectedness that Orlick (2008), Mack (2010), Jackson & Csikszentmihalyi (1999) agree is so crucial for optimal performance.

Conclusion

In conclusion, this chapter's exploration of preparation and performance routines underscores these practices' undeniable role in achieving peak athletic performance. By methodically preparing pre-performance routines, athletes can effectively manage stress and maintain focus, which is essential for achieving the state of flow described by many researchers. Moreover, in-performance and post-performance routines further enhance athletes' ability to stay present and reflect critically on their performance. When planned and executed, these routines do not merely support an athlete in achieving their best performance but also ensure that they are mentally and physically prepared to handle the pressures of their competitive environment.

Week Three Mental Skills Training: Self-Talk.

The Role of Self-Talk in Sports

Self-talk is one of the most commonly used and widespread forms of psychological skills training (PST (Williams & Krane, 2021). Self-talk is the "verbalization or self-statements addressed to the self" (Horcajo et al., 2024). Most individuals are familiar with the expression "self-talk," and all persons engage in this habit, whether knowingly or not. For the Sports psychology practitioner (SPP), the work is to help athletes understand the role of self-talk in modulating their performance. According to Karamitrou et al., "self-talk is a kind of well-being, and especially, a form of cognition that is crucial in the formulation of our emotions, our behavior and our performance as well as in our self-regulation and almost all domains of life (2024, p.1). A large part of the performance endeavor, in addition to physical mastery and task execution, is emotional control, self-regulation, and managing cognitive load. Therefore, it is clear why an understanding of self-talk is so important for those working with athletes.

Professional work with self-talk helps athletes and performers to differentiate between the types of self-talk, motivational versus instructional and positive versus negative, and then to understand the impact these different forms have on how the performer uses self-talk. The resultant pattern of usage of these types of self-talk is directly related to performance outcomes (Horcajo et al., 2024, Karamitrou, 2024, Pickett, 2024, Yang & Wang, 2023, Wallace et al., 2023). The impact of self-talk on performance outcomes is a main tenant of the SPP profession.

The following theories discuss how self-talk impacts performance: In *Mind Gym,* Mack (2010) presents the **ABC** theory of success and stress. **A** is the activating event or the impending performance. **B** is the belief about how one will perform. **C** is the consequence, or the outcome of the feelings and behaviors regarding one's performance at said event. Self-talk has increased perceived efficacy, directly related to the **B** of belief (Horjaco, 2024). So improving self-talk

positively increases the **B**, which results in a positive **C**, which is the performer wining or performing at their best. The **ABC** theory is a simplistic behavioral formula for how self-talk helps athletes improve their performance.

Another way to conceptualize self-talk is presented by Yang & Wang: "The effectiveness of self-talk hinges on its ability to shape one's appraisal of a task as a challenge or threat," (2023, p.3). If an athlete appraises the task (performance) as a challenge, this cognitive switch results in increased attentional control and the engagement of the "goal-directed attentional system," which allows for attentional control and complete focus on the performance. This increased attentional control results in an improved outcome. Finally, Motivational Self-Talk (MST) is conceptualized by Wallace et al. as a "multi-dimensional top-down regulation strategy that focuses on an individual's self-addressed verbalizations, reappraising negative thought patterns that arise during tasks with instructional and motivational statements (2023, p.192). In other words, control the verbalization, control the performance: "These statements influence an individual's conscious attention and appraisal process, leading to a regulation of behavioral performance" (Wallace et al.,, 2023, p.192). However, as mentioned above, self-talk for athletes is nuanced with multiple affecting factors so it requires a greater discussion beyond theory for effective implementation when working with athletes.

Positive Self-Talk in Sports

Positive self-talk in sports is "overt and covert self-statements that athletes say to themselves and are encouraging or self-assuring in tone" (Horcajo et al., 2024). Examples of positive self-talk used in research and in the literature referenced here include statements such as " I can do it" " I can," and "Good job" (Horcajo et al., 2023, Yang & Wang, 2023). Positive self talk has been identified as the ideal way to help athletes helpfully perceive their tasks and

challenges, and to keep their focus task oriented. Positive self talk can be achieved by various means, one way presented by Jackson & Csikszentmihalyi (1999) is to have athletes write down all their thoughts during a training session, and then identify each as positive or negative. Tracking these thoughts allows athletes to identify when they use positive affirmations and when they fall into negativity. Then, the performer can work to change their negative thoughts into positive ones, reframing these cognitive distortions and replacing all negative thoughts with new positive ones. The attached worksheets focus on identifying, reframing, and creating new self-talk patterns.

Positive self-talk is more effective when athletes have a high comfort level with their chosen self-talk statements (Horcajo et al., 2024, Yang & Wang, 2023). One way to ensure that the self-talk statements used by performers are believable, validating, and comforting is to have the athletes choose the statements themselves. The construction of comfortable self-talk statements could be done in a variety of ways. Athletes can be asked to recount their favorite motivational quote and repeat that to themselves. The SPP can help the athlete by using various worksheets for self-talk, one very thorough sheet is attached to this submission. Another way is to ask the athlete what they excel at, in areas of both tasks and performance and write these statements down. Because these statements are organic and generated by the athlete regarding their self-efficacy or self-belief, they will be inherently motivating.

Negative Self-Talk in Sports

Negative self-talk in sports is “both over and covert self-statements that are discouraging or self-deprecating in tone” (Horcajo et al., 2023). The examples of negative self-talk presented in the literature include “I can’t do it” or “What if something goes wrong?” (Horcajo et al., 2023; Jackson & Csikszentmihalyi,1999). While negative self-talk has a bad connotation and is

usually considered a habit that needs to be changed (Mack, 2010; Jackson & Csikszentmihalyi, 1999), research does not show negative self-talk to have an invalidating effect on performance (Horcajo et al., 2023). In fact, in some cultures, those that are more collectivist than individually focused, negative self-talk is beneficial for motivating athletes and improving their efforts and outcomes (Horcajo et al., 2023). An example of motivating negative self-talk is, " I can't do this, but I am going to anyway." Now, it is not suggested that SPPs utilize negative self-talk with their athletes, but rather have an open mind and cultural awareness of how negative self-talk may motivate some of their clients.

The main difference between positive versus negative self-talk is that while negative self-talk has not been shown to impact performance negatively, positive self-talk has been repeatedly shown to increase performance outcomes. This distinction is crucial for SPPs to understand as they develop self-talk routines. If the goal when working with performers is to enhance performance, then utilizing self talk is the most effective MST. This understanding allows the SPP to worry less about negative self-talk and instead focus more on developing a healthy positive self-talk routine.

Motivational and Instructional Self-Talk

In addition to positive and negative, self-talk is categorized as motivational or instructional. These two types of self-talk are very different, and each serves a beneficial purpose when used appropriately to help utilize self-talk for performance enhancement. Examples of motivational statements are in some ways similar to positive self-talk, and they include statements such as " "I can, or I can do it" (Yang & Wang, 2023 p. 6), " Keep pushing, you're doing well" (Wallace et al., 2016, p.193). Research has shown that motivational self-talk is

perhaps more appropriate in games (Yang & Wang, 2023) and is superior for strength and endurance sports.

The other type of self-talk is Instructional, which can be used for technical improvement during training and increased focus during performance. Research shows that instructional self-talk is more appropriate in training (Yang & Wang, 2023). The reasoning is that "Instructional self-talk, though providing procedural clarity and guidance, may not sufficiently recalibrate an individual's appraisal from perceiving a task as a threat to recognizing it as a challenge. Thus the performance is not improved" (Yang & Wang, 2023, p.3). However, instructional self-talk is more effective for fine motor control, learning techniques, or technical and skills training. Specific examples of instructional self-talk include "Look the opposite way" (Yang & Wang, 2023), "I see the target" (Pickett, 2023) or in basketball, "fingers-stretch" or "hands-hands-ball" (Pickett, 2023), "Elbow-wrist-shoot" (Yang & Wang, 2023). These "cues" are short statements an athlete can repeat to themselves before engaging in an athletic task, for example, a golfer may say "hip-elbow-wrist-swing" before they shoot, or a basketball player may engage successfully in instructional self-talk on the free throw line by repeating cues used during practice such as "I see the basket" or "ball through net" and these specific cues will both focus their attention as well as remind them how to execute the skill they've practiced repeatedly properly.

Utilizing Self-Talk Training Plans

Creating a successful self-talk training plan has been researched, although not as extensively, on the impact of self-talk on performance. In his meta-analysis of research on self-talk with professional athletes, Pickett (2023) presents a self-talk training routine that has proven effective. The self-talk instructional program is taught over 12 weeks. The coach or SPP

meets with the athletes/team twice a week. The athletes receive a description of self-talk, how it works, and its performance benefits. Self-talk cues are presented, and athletes are told to use them during training drills. Coaches remind the athletes of these cues in every practice, and athletes incorporate them into all training sessions. Compared to the control group, who had no cues, the athletes receiving cues scored significantly higher on skills testing after the 12 weeks. The SPP can utilize this example of an effective training plan to share with coaches and/or teams. Additionally, Pickett (2023) found in another study that the reminder and repetition of the cues during practice are crucial for the impactful implementation of self-talk.

Individualized self-talk training

A final consideration for teaching athletes self-talk is the importance of individualizing the teaching methods. Pickett (2023) notes that in the same way, PST is similar to strength training, which requires specific consideration while developing a training plan, so self-talk should consider athletes' differences, needs, skills & strengths. It is recommended to consider various cues and see what resonates with the athlete during practice and performance. Additionally, Yang & Wang (2023) found that improper use of self-talk "can disrupt the balance of attentional systems, diminish attentional control and ultimately impact athletic performance" (p.11). This bold statement is based on research that shows that motivational versus instructional self-talk has very different functions in training and performance. When working with athletes, it is important to help them maximize the "allocation of their cognitive resources", and the wrong type of self-talk cue used at the wrong time can send precious attention to the wrong focal point. In other words, self-talk must be highly individualized based on the task. Fortunately, the SPP can be met with the athlete/ coach to determine which cues and self-talk skills are beneficial in training and performance scenarios, based on all the information presented above.

Conclusion

Self-talk emerges as one of the most accessible psychological skills in sports, vital for modulating performance, emotional control, and cognitive management. This exploration discusses the nuanced application of self-talk, distinguishing between its motivational and instructional forms and positive versus negative statements. The effectiveness of self-talk is underscored by its ability to enhance perceived efficacy, focus attention, and shift cognitive appraisals from viewing tasks as threats to recognizing them as challenges. This transformative power of self-talk is theoretical and supported by research indicating significant performance improvements across various sports disciplines. Sports psychology practitioners (SPPs) are tasked with a critical role: to refine and tailor self-talk strategies that align with individual athlete needs, cultural contexts, and specific performance goals, ensuring that this mental skill is maximized for optimal athletic performance.

Week Four Mental Skill Training: Goal Setting and Implementation

Theories of Goal Setting and Goal Achievement

Goal setting is the most widely used and familiar Psychological Skill Technique (PST) athletes employ and is widely used on the professional and individual levels. Goal setting has been proven effective in the business and professional world, and over the last 30 years, it has been widely tested and researched in the sports and athletic world. Studies point to goal setting as highly effective for athletes to achieve their goals. Goal setting is most effective when applied as part of a package with a systemic approach and consistent, thorough manner.

Goal Setting Theory

Goal Setting Theory (GST) is the first such theory to examine the role goals play in impacting and facilitating sports performance (Bird et al, 2024) Locke and Latham generated the following definition of goal: “A goal is an objective or aim of action, defined as attaining a “specific standard of proficiency on a task, usually within a specified time limit “ (William & Krane, 2021). Goal Setting theory examines human behavior and motivation and argues for the presence of five specific goal components SMART, to be discussed below (Lu et al, 2022). Goal Setting theory is considered the most influential theory in motivational psychology and has highly impacted how goals are understood, studied, taught and implemented.

Cognitive Theory

Cognitive Theory is another influential theory in goals and athletic performance. Burton’s theory was developed in 1983 and was the first to focus solely on how goals relate directly to athletic performance. Burton theorized that goals focused only on outcomes were detrimental to an athlete's confidence and efficacy because oftentimes, outcomes are out of an athlete's control. Instead, Burton highlighted the importance of performance goals. These goals

are within an athlete's control and more flexible as they focus on personal performance over placing first in every match, game or event. Burton identified three types of goal styles predicated on goal motivation orientation and perceived ability. These are performance orientations, where the athletes define success as learning and self-improvement coupled with a perceived sense of high ability. Success orientation is where the athlete defines success as more of an outcome goal (i.e., winning and placement), coupled with a high sense of perceived ability. The final goal style is failure orientation, where the athlete focuses on the outcome (again, winning and performance) but has a low sense of perceived ability (Williams & Krane, 2021). These styles of goal setting are crucial to understanding, as successful goal setting depends on the individualization and customization of goals. In other words, the goals set and the type of goal will vary in success depending on the goal-setting style, so knowing an athlete's goal-setting style is crucial.

Implications of Theories Regarding Goals

Why does theory matter? Theory provides the "foundation for the principles that are used widely in most models of goal setting concerning goal content advocated within early versions of goal setting theory" (Bird et al., 2024). Additionally, understanding the more recent theories can offer a basis for goal setting that encourages and allows practitioners to "go beyond a one-size-fits-all approach." Instead, it focuses on customizing the goals to individual needs and challenges. Knowing that theory is important, it is also crucial to note that the Goal-setting process: Preparation, Goal-setting, planning, and Follow-up (Bird et al., 2024) has been identified as the most successful delivery format of goal-setting skills training. Additionally, there is a Goal Setting Package: creating an overall mission, a long-term goal, subgoals, practice

goals, self-talk, and goal visualization (Williams & Krane, 2021). Combining these two formats and goal setting makes it very specific and effective.

Types of Goals

There are distinctions in types of goals: outcome goals represent standards of performance that focus on the results of a contest between opponents or teams. Performance goals focus on improvements relative to one's past performance. Process goals specify procedures in which the athlete will engage during procedures. Group goals are those created with a team. Competition goals were identified as ways to help athletes during performance (Bird et al., 2024). Understanding the types of goals helps identify what type an athlete needs to use. In addition to these types, goals also have characteristics. These include specificity, measurability, focus, context, difficulty, valence, and proximity (Bird et al., 2024). Goals also have proximity (long vs short). Short goals are daily and/ or no more than six weeks ahead. Long-term goals vary from one-year to four-year cycles. Knowing these various distinctions between types and characteristics is important for the Sports and Performance Practitioner (SPP) because as they work with clients, they will develop a collaborative goal-setting package, which follows the outline of the goal-setting process and gives consideration to the characteristics and types of goals that may be of value to a client.

Goal setting and Motivation, Self-Efficacy, and Confidence

Goal setting consistently and facilitates performance (Williams & Krane, 2021). Research shows that goals set in practice were typically proposed to enhance motivation during training while also allowing athletes to focus on improvements. (Bird et al., 2024) In contrast to general goals, specific goals were more effective at changing behavior and more potent in enhancing motivation and performance (Bird et al., 2024.) This fact is important to remember

when working with athletes to help them identify their SMART goals. Additionally, research demonstrates how team goal-setting has increased collective efficacy (Bird et al. 2024).

Evaluating goals and progress via feedback and monitoring can help with goal revision and adjustment, increasing confidence and intrinsic motivation if goals are being achieved. If goals are not achieved, increased motivation to hit goals could result (Bird et al, 2024) It is important to note that goals plus feedback have been identified to be much more effective than just goals by themselves. Goals plus feedback back are so effective together because feedback allows the athlete to assess the "discrepancy" between their performance and their desired performance (goal) and increase motivation, persistence, and effort (Bird et al., 2024).

Goals and Self-Efficacy After Injury

Goals have also been shown to improve self-efficacy after injury. With injury being so common in sports (4 million injuries a year!), and the mental impact of injury as negating an athlete's sense of self-efficacy, goal setting can provide a roadmap for mental healing and have a positive influence on the process and outcome of recovery (Brinkman et al 2020). It is important to note that the positive influence of goals on an athlete's recovery from injury was directly related to goals "negotiated with a sports psychologist" and those that were "rated on a scale of 1-10 for importance to the athlete." The Brinkman et al. (2020) review of goal-related interventions for recovery and self-efficacy highlights the importance of the athlete being included in the goal setting, making it collaborative, and the power of goal ranking.

SMART goals

The SMART/SMARTER acronym is a widely recognized framework for effective goal-setting in business, education, management, learning, and athletics. Introduced by George Duran in 1981, SMART stands for Specific, Measurable, Achievable, Relevant, and Time-based

goals. This framework has been widely adopted and applied over the past four decades. SMART goals reflect the work of Locke & Latham, who developed GST, which stated that effective goals require five principles: Goals must be clear, challenging, complex, and committed to and must allow for feedback (Lu et al., 2022). Research, including studies by Egbert and Roe, has consistently shown the efficacy of goal setting in behavior change and performance enhancement across different contexts, including physical activity (Egbert & Roe, n.d.).

SMARTER goals

The SMARTER acronym represents an evolution of the SMART framework, with the addition of "E" for evaluation and "R" for revision. This updated version underscores the importance of ongoing assessment and adjustment of goals to ensure their effectiveness (Duran, 1981). While the SMARTER framework originated in management, its principles are highly applicable to athletics and other domains where goal setting plays a crucial role in performance improvement and success. Numerous worksheets and handouts exist to teach SMART & SMARTER goals to athletes to teach them to lay out their goals in a manner that will allow them to achieve them. Specificity is a very important aspect of goal setting, as specific goals have been identified as being more impactful to performance outcomes, than “just do better” goals (Bird et al., 2024).

Barriers to Goal Setting and Goal Achievement

Various barriers to goal setting and achievement are common and can be modified through awareness and education. Identified barriers to goal setting include Internal barriers such as a lack of confidence, an external barrier, i.e., lack of time to practice or commitment, as well as a misunderstanding or misapplication of the goal-setting process itself (Bird et al. 2024; Williams & Krane, 2021). The best way for an athlete to overcome these barriers begins with a

needs analysis and often a comprehensive look at the athlete's goals for themselves (Bird et al., 2024). Once athletes have identified what is highly important to them and in line with their long-term goals, dreams, and aspirations, they can break down these larger goals into smaller, more achievable, and specific goals (Orlick, 2016).

Education and Goal Setting

Proper education on goal setting is useful for overcoming goal achievement barriers as it can benefit athletes (helping them understand goal-setting principles such as goal types, goal difficulties, and goal proximity) and teach them about other stages of the goal-setting process (needs analysis, effective goal characteristics, ways to monitor goal progress). Additionally, explaining common goal-setting mistakes could help remove barriers (Bird et al., 2024). For example, an athlete may set too many goals at once and then become overwhelmed and not achieve any of these goals.

Customization and Individual Variability

Additionally, customization and variability in goal-setting styles impact the goal-setting process (Williams & Krane, 2021). Goal setting is effective when it involves a systematic approach tailored by knowledgeable professionals. These experts must customize the process to align with the athlete's specific goal-setting orientation and motivational style, as discussed by Williams & Krane (2021). To create these types of customized goal packages and programs, professionals must consider goal orientation, as discussed above, what motivates athletes, and how short-term, specific goals are relevant to the long-term overall goal of the goals of athletes.

Conclusion

In summary, goal setting has emerged as a pivotal technique in enhancing athletic performance, underpinned by theories such as Goal Setting Theory and Cognitive Theory. These

frameworks highlight the psychological foundations of goal orientation and its direct impact on performance, emphasizing the necessity of tailoring goals to individual athlete profiles. The evolution of goal-setting practices, from SMART to SMARTER goals, underscores the importance of specificity, measurability, and adaptability in fostering athletic success. However, effective goal setting is not without challenges. To optimize goal achievement, practitioners must navigate various barriers—from internal doubts to external constraints. Integrating systematic goal-setting processes, continuous evaluation, and personalized feedback mechanisms is necessary to overcome these barriers. Ultimately, goal setting is not merely about establishing objectives but fostering a conducive environment for athletes to excel, where they experience motivation, self-efficacy, and ongoing support. Leveraging comprehensive goal-setting strategies will help sports professionals can elevate the performance and overall well-being of athletes, ensuring that each goal is one the athlete truly desires and becomes a milestone on their journey.

Week Five Mental Skills Training: Mental Toughness

Working Definition of Mental Toughness

Mental toughness is often considered the defining characteristic that separates highly competitive and successful athletes from their peers. Mentally tough athletes believe that they can and will beat their opponents. This belief arises because these athletes are better trained, mentally stronger, and able to rise above the challenging physical and psychological demands that are a natural part of training and competition. Mentally tough athletes exhibit determination, focus, confidence, and control of body, emotions, and mind, regardless of the athlete's current stresses. This resilience allows them to navigate the rigorous demands of high training and competition effectively. While some athletes may possess mental toughness, it is a skill that can be cultivated through practice, coaching, and willingness. Consistently displaying these characteristics distinguishes the mentally tough athlete from their competition and enables them to achieve and perform at their peak.

Theoretical Origins of Mental Toughness

In the mid-1980s, Jim Loehr introduced the concept of mental toughness. He "emphasized that athletes and coaches felt that at least fifty percent of success is due to psychological factors that reflect mental toughness" (Middleton et al., 2005, p.1). Loehr's model of mental toughness developed through multiple iterations of the concept, and he tried to identify the various foundational constructs for his understanding of mental toughness. Other psychologists continued to work with the idea of mental toughness, notably Goldberg (1998), who emphasized the role of mental training techniques such as visualization, goal setting, and positive self-talk in enhancing athletic performance. Goldberg also highlighted the importance of psychological resilience and maintaining focus under pressure. Hodge (1994) studied the impact

of coaching behaviors and team dynamics on the development of mental toughness. Hodge also highlighted the role of psychological skills training in fostering resilience and performance consistency. His research trio has significantly contributed to conceptualizing and measuring mental toughness in sports. In 2002, Jones, Hanton, and Connaughton conducted an influential study that identified key attributes of mental toughness, including confidence, consistency, and control, and developed a framework that defines mental toughness as a multifaceted construct involving personal characteristics, attitudes, and mental skills. Their work laid the groundwork for subsequent research and practical applications in sports psychology. As mentioned above, Loehr (1982, 1986) pioneered performance psychology by focusing on mental toughness. Loehr introduced the "ideal performance state" and developed comprehensive mental toughness training programs. (Gucciardi, et al 2015, ,Middleton et al., 2005).

Development of Theory Over Time

However, all these approaches lacked the research and psychometric validity to be a working, validated definition or evaluative tool of mental toughness (Gucciardi et al., 2015; Middleton et al., 2005). Over time, studies working with athletes on the constructs of mental toughness were developed. Eventually, there was consensus that mental toughness was not indicative of any one character trait but rather multi-faceted. The twelve components were identified: “self-efficacy, potential, mental self-concept, task familiarity, value, personal bests, goal commitment, perseverance, task focus, positivity, stress minimization, and positive comparisons” (Middleton et al., 2011, p.3).

The Mental Toughness Inventory (MTI) was developed based on the multidimensional understanding of mental toughness. It is a comprehensive tool designed to evaluate athletes' mental toughness, providing insights into strengths and areas for improvement (Gucciardi et al.,

2015). The MTI is highly effective for those working with sub-elite and elite athletes (Gucciardi et al., 2015; Middleton et al., 2011)

The C Models of Mental Toughness

More than one author and psychologist has presented the "C" model of mental toughness to create a workable, teachable, and coachable model. First, the four C models: Control, which is managing one's environment and emotions effectively; Challenge: Viewing challenges as opportunities for growth rather than threats; Commitment, A steadfast dedication to goals and consistent effort; Confidence: Assurance in one's capabilities and decisions (Clough et al., 2002). These four C's are often found in the worksheets and handouts given to athletes in mental training sessions; see the attached file.

Gary Mack presents the seven C's model of mental toughness. His model is more in-depth than the four C's model: Competitive: The drive to outperform opponents and push personal limits. Confident: A strong belief in one's abilities and the capacity to succeed. Control: The ability to maintain composure and influence over emotions and situations. Committed: Dedication to goals and persistence in the face of challenges. Composure: Maintaining calm and collected under pressure.Courage: Willingness to take risks and confront fears.Consistency: Steady performance and adherence to high standards (Mack, 2001). Working with these "C" models of mental toughness is more accessible to teach athletes and help them set goals and train their mental toughness than working with the 12 constructs in the MTI.

Practical Applications of Mental Toughness

Mental Toughness training (MST) is a skill that can be learned through dedicated practice and coaching. Although it has been identified as a long, complex process, incorporating the following approaches will allow the athlete to practice and develop mental toughness.

Goal Setting

Break down long-term goals into manageable short-term objectives. Athletes should identify their ultimate objectives and break them into achievable daily tasks and intermediate goals. This method helps maintain motivation and provides a clear, structured roadmap for progress and achievement (Crust & Clough). SMART Goals: By encouraging the use of SMART criteria (Specific, Measurable, Achievable, Relevant, Time-bound, the Sports Consultant can ensure that an athlete's goals are well-defined and attainable. ((Lu et al., 2022) Additionally, athletes can use visualization. Athletes should visualize achieving their long-term goals, which can reinforce commitment and enhance motivation.

Environmental Influences

Seek a coach who fosters problem-solving skills in challenging situations and provides constructive feedback. This type of environment promotes independence and resilience in athletes. Coaches should create an environment encouraging athletes to solve problems independently or collaboratively, enhancing critical thinking and resilience. After facing challenges, coaches should provide feedback highlighting strengths and identifying improvement areas, aiding in athletes' learning and growth. Supportive Environment: Maintaining a positive and supportive training atmosphere enhances athletes' confidence and willingness to tackle challenges. (Crust & Clough, 2011)

Challenge and Support

Engage in high-pressure training scenarios to develop coping strategies and receive performance feedback. Emphasize the importance of athletes owning their decisions and collaborating with teammates for practical solutions. Simulating high-pressure situations: Incorporate drills and exercises that replicate competitive pressures, helping athletes practice

maintaining composure and focus. Ownership of decisions: encourage athletes to take responsibility for their decisions during training and competition, enhancing their problem-solving skills and fostering independence. Peer collaboration: Promote teamwork and peer support to build a collaborative approach to problem-solving and resilience. (Crust & Cullough, 2011).

Social Support Network

Maintain a diverse support system by connecting with parents, peers, coaches, and experienced athletes who can guide one another through setbacks and challenges. These relationships offer valuable perspectives and help athletes navigate the complexities of sports performance. Diverse support system: Athletes should cultivate a network that includes family, peers, coaches, and seasoned athletes to receive guidance, perspective, and encouragement. Role models: Engaging with experienced athletes and role models offers insights and strategies for overcoming setbacks and enhancing mental toughness. Navigating challenges: A strong support network assists athletes in managing injuries, comebacks, and unexpected challenges, providing emotional support and practical advice. (Crust & Cullough, 2011, Razavn, et al., 2021).

Reflection

Post-Performance Analysis: Regularly reflect on training sessions and competitions to assess performance, mental state, and emotional responses. Keeping a journal to track these reflections can reveal patterns and areas for improvement, aiding in the continuous development of mental toughness. Reflective journaling: Athletes should keep a journal to track their thoughts, emotions, and performance after training and competitions. This practice can help identify patterns and areas for improvement. Focus on mental states: Reflecting on mental and emotional states during performance can help athletes understand what strategies best maintain

focus and composure. Identify strengths and weaknesses: Regular reflection can help athletes recognize their strengths and pinpoint areas that need development, facilitating continuous improvement. Feedback loop: Use reflections to create a feedback loop where insights from past performances inform future training and competition strategies. (Mack, 2001, Orlick, 2016). Developing the practices listed and explained above will help the willing, hard-working athlete develop mental toughness and rise above peak performance.

Conclusion

In summary, mental toughness is a critical attribute that sets successful athletes apart, enabling them to ascend competitive sports' intense physical and psychological demands. This paper has traced the evolution of mental toughness from Jim Loehr's initial conceptualization to the diverse models developed by subsequent researchers. The work of Goldberg, Hodge, Jones, Hanton, Connaughton, and Loehr has been instrumental in defining and refining the concept, emphasizing key aspects such as psychological resilience, goal setting, and maintaining focus under pressure. These foundational elements have been integrated into practical frameworks like the Mental Toughness Inventory (MTI) and various "C" models, making mental toughness a teachable and measurable skill.

The practical applications of mental toughness training are extensive, providing athletes with specific methods to enhance their mental resilience. Techniques such as goal setting, simulating high-pressure situations, fostering a supportive environment, and engaging in reflective practices are essential for developing mental toughness. By building a diverse support network and encouraging ownership of decisions, athletes can enhance their problem-solving skills and maintain composure under pressure. The comprehensive approach outlined in this paper equips athletes with the tools to develop their mental toughness, ensuring they can

navigate challenges, achieve their goals, and sustain peak performance throughout their athletic careers. Through dedicated practice and coaching, mental toughness can be cultivated, allowing athletes to excel and distinguish themselves in their respective sports.

Week Six Mental Skills Training: Attention, Focus, and Concentration

Introduction to Focus and Concentration

Overview of the Importance of Focus and Concentration

Attention, focus, and concentration are critical for any type of performance. Imagine trying to play the violin on stage, rush to save someone in a fire, or hit a fastball going 85 mph. The focus and attention required to complete these tasks is almost unfathomable. However, performers train themselves to do these challenging tasks while experiencing constant distractions from the crowd, internal and external stimuli, and damage to control their focus, attention, and concentration to do so successfully. The role of the sports psychology practitioner is to be knowledgeable about the role of focus, attention, and concentration to share strategies with performers to impact their performance positively. To best understand the specificity and applicability of each term, attention, focus, and concentration are defined, and examples are shared to provide a specific understanding of what each mental skill means. Following this is an overview of the theories associated with attention, focus, and concentration, providing a foundational understanding of how these three states of mind impact performance. Nideffers Attentional Model is presented as one of the most applicable theories used**.** Next, a discussion of the various types of distractions, broadly categorized as external or internal, is explained, allowing for the distinction in which strategies to use for each distraction. Finally, real-life strategies are discussed to offer solutions for athletes and performers struggling with attention, control, and focus.

Attention, Focus, & Concentration

The difference between attention, focus, and concentration is essential to discuss before any presentation of theory and strategies to use these three skills. Each of these skills has a specific and foundational role to play in the overall mental engagement of the athlete in their

performance. Attention: The ability to selectively process pertinent information. Attention is the first mental skill defined as the basis for focus and concentration. Focus is sustained attention on a particular task or object. Focus follows attention because once the athlete has honed in on the specific information that requires their attention, they use focus to create sustained attention. Focus is an essential component of sporting success. Focus allows performers to attend to the cues in hand and concentrate on tasks to achieve success. The ability to focus is crucial because it will allow performers to achieve their goals (Orlick, 2000). A controlled focus can lead to flow if practiced and achieved correctly over time.

Concentration is the ability to maintain focus over time. It involves the skills of attention and focus and refers to the athlete's ability to hold their attention and focus over an extended period. Specifically, concentration entails focusing on the task without being affected or disturbed by internal or external distractions (Orlick, 2000).

The Importance of Attention, Focus, and Concentration

"Distractions- internal and external, create the greatest barrier to high-level performance (ORlick, 2010, p. 97)**."** Distractions and their negative impact are why attention, focus, and concentration are of the utmost importance for athletes to develop as they improve their physical skills. The benefits of focusing on the big three that help avoid distractions ar**e** improved performance, better attention, focus, and concentration, leading to better decision-making and execution of skills. Enhanced situational awareness: allows athletes to be aware of their environment and make strategic decisions. Reduced errors: Maintaining concentration helps reduce mistakes caused by lapses in focus. Many benefits can be achieved through a positive focus plan and controlling distractions.

Distractions are of two broad types: internal and external. Internal and external distractors impact attention, focus, and concentration. Internal Distractors are any mental or physiological state that bothers the athlete and detracts attention and focus away from the task, causing them to lose concentration (Olrlick, 2000). These internal distractions can include emotional states (e.g., anxiety, stress), physiological states (e.g., fatigue, hunger), or cognitive processes (e.g., intrusive thoughts, self-talk) (Mack, 2001). External distractors are the numerous uncontrollable factors constantly occurring around the athlete during training, preparation, and competition. These external factors include environmental factors (e.g., noise, visual stimuli), social factors (e.g., audience presence, peer pressure), and Task-related factors (e.g., complexity, plays, positioning).

Theories of Attention, Focus, and Concentration

Below are some influential attention, focus, and concentration theories. These theories, Flow Theory (Csikszentmihalyi, 1990), Attentional Control Theory (Eysenck et al., 2007), and Nideffer's Attentional Model (1976), represent some of the most critical theories in the current understanding of how attention focus, and concentration impact performance.

Flow theory comprises the concepts of immersion, intrinsic motivation, focus, and attention, all resulting in peak performance (Csikszentmihalyi, 1990). Flow Theory states that focus and attention are central to achieving the flow state. During flow, an individual's attention is fully absorbed in the task at hand, allowing them to concentrate intensely and exclude irrelevant thoughts and external distractions. The clear goals facilitate the intense focus and immediate feedback that characterize flow-inducing activities, helping individuals maintain their concentration and adjust their actions to meet the task's demands (Csikszentmihalyi, 1990). Focus and attention in flow are also linked to the balance between the individual's skill level and

the challenge presented by the activity. When balance is achieved between excessive challenge and boredom, balance is achieved, helping sustain their focus and attention. The immersive nature of flow means that all cognitive resources are devoted to the activity, resulting in a seamless and highly efficient performance. This undivided attention leads to a loss of self-consciousness, where the individual becomes one with the activity, further enhancing the flow experience and optimizing their performance and satisfaction (Csikszentmihalyi, 1990).

Attentional Control Theory (Eysenck, 2007): At its core, Attentional Control Theory (ACT) posits that everyone has goal-directed vs. stimulus-driven systems. Goal-driven systems require top-down control, and stimulus-driven systems require bottom-up control(Eysenck et al., 2007). ACT explains that high arousal levels negatively impact the balance between goal-directed attention and stimuli-driven systems. Usually, these exist in a balance between top-down cognition and bottom-up arousal. However, when arousal is high, stimuli-driven systems demand more attention, directly impacting performance as an athlete can lose focus on the activity that requires their attention. In other words, high levels of anxiety impair the ability of the goal-directed attentional system. According to ACT, this heightened arousal diverts attention towards threat-related stimuli rather than task-relevant cues, causing the athlete to make performance errors. (Orlick, 2000).

Nideffer's Attentional Model is a framework for understanding how athletes allocate mental resources to cues, stimuli, or states during performance. "Attention in sports and exercise performance involves selectively focusing on relevant information while ignoring distractions. Proposed two key dimensions of attentional focus: direction (internal or external) and width (broad or narrow), creating four quadrants: broad external, broad internal, narrow external, and narrow internal" (Neumann, 2019, p. 2). Ndeiffer's model is highly relevant because once

athletes (and those working with them) understand the various quadrants of focus, they can learn how to shift and control their focus and concentration, giving them control of their attention, which is crucial to performance success. Attention naturally shifts without conscious awareness during any task or performance, affecting effectiveness and efficiency. Nideffer's model (1976) helps manage these shifts by providing a clear structure for understanding different types of attentional focus. The four quadrants can be described as follows:

1. Broad External or Awareness of the Environment: This involves scanning the surroundings. For example, a skier examines the snow conditions, length of the course, and closeness of the slalom gates.
2. Broad Internal or Analyzing and Strategizing: Involves internal analysis of bodily states and strategies. For example, this same skier checks in on their body position, heart rate, and self-talk.
3. Narrow Internal or Focusing on Specific Internal Thoughts or Feelings: Involves mental rehearsal and focusing on specific thoughts. For example, skiers work to control their breathing and use mantras to eliminate external distractions.
4. Narrow External or Focusing on Specific External Cues: This involves focusing on specific external targets. For example, the skier envisions the gates on the course and how they will navigate each one.

It is crucial to create awareness among performers about where their attention is placed within these quadrants. Each quadrant serves specific functions and is appropriate for different situations. Broad external attention is helpful for environmental scanning and situational awareness, while narrow internal attention is essential for focusing on specific thoughts or

feelings. Athletes should practice deliberately shifting between these quadrants as needed to optimize performance. By consciously managing their focus, athletes can ensure that their attention aligns with the demands of the task at hand. The ability to control attention can be enhanced through deliberate practice, improving overall effectiveness in various activities.

Arousal and Attention Control

High arousal has the direct impact of narrowing the attentional focus. ACT (Eysenck, 2007) is an applicable theory for understanding how high arousal impacts attentional focus. Consider the following example with a snow sports athlete. A ski racer or snowboarder may experience heightened arousal due to the pressures of the race. This increased arousal may lead them to focus on potential dangers or adverse outcomes, i.e., fear of falling or performing poorly. This misdirected attention will overwhelm the goal-directed system, the one engaged during training. A goal focus is responsible for attention to the critical aspects of the race, such as optimal line selection, balance, and technique. Instead, the athlete's attention becomes consumed by the stimulus-driven system, which is more reactive and less efficient in handling the race demands—diminished attentional control results in decreased performance. The skier might become hesitant, make poor decisions, and have a slowed reaction time. Examples are an athlete overthinking, not correcting their balance quickly even if they feel an edge slip, worrying over their split time, or even catching a gate with their pole. The boarder's inability to focus on critical performance elements will lead to errors, which are especially risky at top speed and increase the risk of falls or a slower run. This particular example is important because it fully iterates what can occur when arousal overwhelms attentional control.

Practical Techniques for Enhancing Focus and Concentration

Practical Strategies for improving mental training include the mental skills discussed throughout this curriculum. These strategies include mindfulness, medication, goal setting, self-talk, and routine management.

Mindfulness and Meditation Practice

Techniques like meditation can help improve overall attentional control. Meditation has been shown repeatedly to be a successful strategy to help athletes shut out external distractions and manage intrusive internal distractions (Mack, 2010). The approach suggested here is different, as it is more quantitative. Still, this quality will allow it to be directly beneficial to athletes by showing them where their mindfulness can improve. The Five Facet Mindfulness Questionnaire (FFMQ) (Baer et al., 2006) assesses mindfulness practice. This tool helps identify strengths and areas for improvement in mindfulness. One common finding is strength in the facet of non-reaction. So much of attentional control focuses only on the controllable, and to be nonreactive is maintaining concentration. To enhance mindfulness, particularly in performance settings, individuals can become more aware of when they are judging their thoughts and reactions. Instead of judging negative thoughts, they can identify and replace them with positive ones. This strategy aligns with the concentration and focus skill of Tic/Toc, as presented by Williams and Krane (2018) in their chapter on focus and concentration. Tic/Toc is another strategy to change a negative thought into a positive one and is also helpful for concentration and focus.

Goal Setting

Having specific, achievable goals can help maintain focus. Goal setting consistently and facilitates performance (Williams & Krane, 2021). Research shows that goals set in practice

were typically proposed to enhance motivation during training while also allowing athletes to focus on improvements. (Bird et al., 2024) In contrast to general goals, specific goals were more effective at changing behavior and more potent in enhancing motivation and performance (Bird et al., 2024.) Therefore, athletes can use the setting of specific, achievable goals to maintain focus.

Self-Talk and Cognitive Restructuring

Self-talk is one of an athlete's most vital tools for controlling their attention, focus, and control. Yang & Wang state, "The effectiveness of self-talk hinges on its ability to shape one's appraisal of a task as a challenge or threat" (2023, p.3). If an athlete appraises the task (performance) as a challenge, this cognitive switch results in increased attentional control and the engagement of the "goal-directed attentional system," allowing for attentional control and complete focus on the performance—increased attentional control results in an improved outcome. Finally, Motivational Self-Talk (MST) is conceptualized by Wallace et al. as a "multi-dimensional top-down regulation strategy that focuses on an individual's self-addressed verbalizations, reappraising negative thought patterns that arise during tasks with instructional and motivational statements (2023, p.192). In other words, control the verbalization, control the performance: "These statements influence an individual's conscious attention and appraisal process, leading to a regulation of behavioral performance" (Wallace et al., 2023, p.192). It is clear why self-talk is so important for attentional focus.

Routine Management

Establishing pre-game routines can prime the mind for concentration. Pre-game routines involve athletes engaging in specific task-relevant thoughts and actions before their performance because it helps them maintain control under pressure (Mesagno & Mullane-Grant, 2010). If

athletes can retain control over their minds and bodies, there is a better chance they can achieve flow because their stress is controlled. Pre-game routines are not just pertinent in the few hours before or on the day of the game but can be beneficial in the days leading up to the game or performance event. Orbac and Blumenstien (2022) noted that mental load and emotional tension can increase during the days leading up to the competition. The goal of the CMPC with a Pre-Performance Routine (PPR) is to help the athlete manage this inevitable anxiety. This state can occur when distraction increases and focus wanes, which causes the athlete to fail to focus on the relevant task (Mesagno & Mullane-Grant, 2010). Therefore, the pre-performance routine aims to keep the athlete in a state of task focus while decreasing their mental load, tension, and distraction.

Conclusion

In conclusion, integrating mental skills training to attend to attention, focus, and concentration is paramount for enhancing athletic performance and overall mental engagement. Athletes can better manage their cognitive resources to achieve peak performance by understanding the distinctions and interconnections between these three skills. Fundamental theories such as Flow Theory, Attentional Control Theory, and Nideffer's Attentional Model provide valuable frameworks for comprehending how attention and focus can be optimized. Flow Theory emphasizes the importance of balancing skill and challenge, allowing athletes to achieve a state of complete immersion and optimal performance. Attentional Control Theory highlights the impact of anxiety on attentional systems, underscoring the need for strategies to manage arousal levels to maintain focus. Nideffer's Attentional Model offers a practical approach for athletes to understand and control their attention by shifting between different types of attentional focus as required by the task. Applying practical techniques such as mindfulness

and meditation practices, goal setting, self-talk, and routine management can significantly enhance an athlete's ability to focus and concentrate. Goal setting helps maintain motivation and focus, while self-talk and cognitive restructuring enable athletes to reframe negative thoughts and sustain attention on performance-related tasks. Routine management, including pre-game routines, helps prime the mind for concentration and reduces anxiety, leading to competition. By incorporating these mental skills training techniques, athletes can improve their ability to control attention, focus, and concentration, leading to better decision-making, reduced errors, and enhanced performance**.**

Week Seven Mental Skills Training: Imagery and Visualization

Introduction

Among the various techniques employed in mental skills training, imagery and visualization are beneficial. Based on creating and re-creating mental experiences, these methods offer athletes an advantage to hone their skills, improve performance, and gain a competitive edge. The efficacy of imagery is well-documented across various sports, where it aids in refining techniques, mastering new skills, and managing the mental aspects of competition. This paper explores the essential aspects of imagery and visualization in sports, focusing on what imagery is, how and when to use it, and why it is crucial for athletes. By delving into theoretical frameworks such as Mental Practice Theory, Functional Equivalence Hypothesis, and Bioinformational Theory, this paper will examine how these concepts create the foundation for the practical application of imagery. To understand the different types of imagery—motivational and cognitive— they are categorized into specific uses in enhancing athletic performance. Incorporating imagery into training routines can give athletes a competitive edge, enabling them to perform at their peak without the physical toll of constant practice. As this paper will demonstrate, effective use of imagery prepares athletes for high-pressure situations and fosters mental toughness, making it an indispensable tool in the repertoire of sports performance practitioners.

What Imagery Is, When To Use Imagery, and Why Imagery Is Important

What Imagery Is

Imagery creates and re-creates mental experiences (Gregg et al., 2005). “A central component of imagery is that these experiences, or images, are multisensory; thus, one’s image should incorporate multiple senses” (Ely et al., 2020, p.2). Imagery in sports is a powerful tool that has proven effective in improving training, performance, and recovery from injury (Orlick,

2000). How and when imagery is used impacts its efficacy. There are various theories and approaches to determine how the Sports Performance Practitioner (SPP) can best utilize imagery to help athletes achieve their peak potential.

How to Use Imagery

Imagery is an ability that can improve with practice (Williams & Krane, 2020). Using imagery can also be as impactful to training as the physical repetition of an activity multiple times. As Orlick writes, "You need a certain number of successful repetitive experiences to create an integrated net of nerve cells (called neuronets) in your brain to perform a skill at a high level with consistency" (2000, p. 113). Imagery can be considered a training hack that can highly improve the levels of training without physically taxing an athlete's body. When used this way and done correctly, imagery and visualization provide a competitive edge to athletes in both training and performance.

Imagery is also compelling in re-creating mistakes and correcting them. If an athlete makes a mistake, rather than repeatedly replay the mistake, they can take control of the replay in their mind. They imagine the scene that went wrong, but at the point of error, they insert a correct response or movement and replay this image in their mind. This approach allows the performer to gain control over the performance in their mind's eye and ensure they do not spiral out of control by over-focusing on small mistakes. Using imagery perfectly illustrates how a specific skill can facilitate mental toughness. (Orlick, 2016; William & Krane, 2021).

There are two types of imagery that an athlete or performer can use. The distinction between these is called Internal and external imagery. External imagery is similar to watching oneself on videotape, while internal is seeing oneself complete the activity through one's own eyes, or as Williams & Krane call it, seeing the activity complete through the "Mind's Eye"

(2021, p. 247). To determine which type of imagery to use, an athlete must practice using both and see which is more effective for them in their practice.

Multisensory imagery is the most effective form of visualization (Monsma, 2003). This approach includes the five senses (sight, touch, hearing, taste, seeing, and smell) and emotional senses. The incorporation of the emotional senses is part of PETTLEP-based imagery. PETTLEP is an acronym for Physical, Environment, Task, Timing, Learning, Emotion, and Perspective. This comprehensive approach to imagery incorporates each component of PETTLEP to ensure the athlete has a whole sensory experience while engaged in imagery. Ramsey et al. (2010) researched the effectiveness of PETTLEP, explicitly focusing on the emotional component. Their work found that imagery with the emotional component was significantly more effective than imagery without the emotional component. This research aims to encourage athletes to feel various emotions during pre-practice, pre-competition, and during-competition visualizations to replicate best the experiences they seek to duplicate.

When to Use Imagery

Imagery can be used during pre-practice to establish a routine: When imagery becomes part of the routine, it will be easier to implement during a high-anxiety situation. So, use it pre-practice to get" primed." Then, it will be a natural segue to use during pre-competition. It works by priming the correct movement execution (Williams & Krane, 2021). Imagery used in a pre-practice routine can help the athlete calm down, psych up, or focus on relevant aspects of the task, depending on the goal for practice. Implementing imagery for Pre-competition assists in preparedness, primes the body, and has been shown to help with focus (Toovey et al., 2020). Athletes can create a planned sequence of thoughts and behaviors that lead to automatic performance execution. Then, during the competition, the athlete can perform better, having

already primed their attention and focus and being fully prepared for whatever occurs. The use of imagery during performance is beneficial for execution. If an athlete has already imagined the performance, the course, the plays, and the possibilities, they have, in a way, already experienced everything that can occur at the performance, so when it is time to execute, they do not have to think about any specific scenario that may arise. They simply react. Alternatively, as Olympian Missy Franklin states, "When I get there, I have already pictured what is going to happen a million times, so I do not have to think about it" (Williams & Krane, 2021, p. 245). Imagery has enormous implications for relieving the pressure athletes are under, for if used correctly, it allows the athlete to focus on the task without wasting any energy or arousal on specific distractions.

Primary Theories Of Imagery

Mental Practice Theory

Mental practice theory suggests that mental rehearsal (visualization) can serve as a form of practice, enhancing skill acquisition and performance (Williams & Krane, 2021). Mental representation combines elements of symbolic learning and psychoneuromuscular theories, an accepted approach that the mental practice of an activity is equitable to engaging in the activity (Ely et al., 2020; Issajeva, J. 2020). An example of mental practice is practicing a piece of music, which can enhance a musician's ability to perform it accurately and expressively when they physically practice. In an athlete setting, the mental rehearsal of a tennis swing Mental practice is effective in rehabilitation settings where physical practice is limited, such as during injury recovery. Additionally, mental practice theory is the basis for the widely accepted tenant of imagery by SPPS that higher levels of mental repetitions can be just as adequate as high levels of physical training but provide an opportunity for the physical body to rest, therefore creating the competitive edge for the athlete while still allowing them to train (Ely et al., 2020).

Functional Equivalence Hypothesis

Functional Equivalence Hypothesis theory proposes that mental imagery and physical practice share similar neural mechanisms. According to functional equivalency, motor imagery (MI) is just as effective as the actual motor preparation (MP) process because the brain processes imagined actions similarly to physical ones. An example of A golfer visualizing their swing might activate the same neural circuits as when they physically practice the swing, aiding in muscle memory and technique refinement. Functional equivalency emphasizes the importance of vivid, detailed imagery to closely mimic physical practice.

While functional equivalency (FE) was an accepted theory for some time, it has advanced. In their work on functional equivalency, Toovey et al.(2000) compared MP, the physical action of a sports movement, with the process of MI, the visualization of an activity. Their work showed that athletes who used both MI and MP had higher results than those who used MI or MP alone. This finding both negates and improves upon the FE hypothesis. In essence, FE is inaccurate, but the exciting application is that MP and MI can be used to increase action-specific results.

BioInformational Theory

The bioinformatical theory of emotional imagery is a model of the hypothetical mental representations activated when people imagine emotionally engaging events and is initially proposed to guide research and practice in using imaginal exposure as a treatment for fear and anxiety (Bradley, 2023). Bio informational theory “proposes that narrative imagery, typically cued by language scripts, activates an associative memory network that includes stimulus, semantic and, most critically for emotion, response information that represents relevant real-world coping and reactions” (Bradley, 2023, p.1). Supported by recent neuroimaging

studies, bioinformational theory connects emotions to physical actions. It allows the athlete to access the memories created in rehearsal, resulting in a thorough, controlled execution during a high-pressure performance (Bradley, 2023). An example of bioinformational theory at work is a soccer player preparing for a penalty shootout in soccer, by rehearsing the environment and responses.

Categories of Imagery and Five Specific Purposes

Imagery in the context of sports psychology and performance enhancement can be broken down into four primary categories: motivation-general, motivation-specific, cognitive-general, and cognitive-specific. Each category serves distinct purposes and targets different aspects of an athlete's mental preparation and performance (Gregg et al., 2005). The better imager an athlete is, the more of these strategies they will use, and the more of these applications they use, the better imager they will become. Understanding how each category helps athletes with each performance aspect is essential.

The two categories are motivation and cognitive. Motivation-General (MG) is divided into Motivation-General Arousal, Motivation-General Mastery, and Motivation-Specific. Cognitive breaks down into Cognitive General and Cognitive Specific.

Motivation-General Arousal (MG-A):

MG-A aims to regulate arousal levels and manage anxiety. An example is an athlete who visualizes feeling confident and relaxed before a competition to manage pre-game nerves. Athletes use MG-A to stay calm under pressure. MG-A helps performers maintain optimal arousal levels to avoid over-excitement or under-preparation.

Motivation-General Mastery (MG-M)

MG-M enhances overall motivation and feelings of mastery or self-efficacy. For example, imagining successful performances and overcoming challenges boosts an athlete's belief in their abilities. This is an essential aspect of imagery for all athletes. MG-M has been shown to enhance confidence and persistence and is helpful for long-term motivation and dealing with setbacks (Gregg et al., 2005).

Motivation-Specific (MS)

MS can increase motivation by visualizing specific goals and outcomes. For example, athletes visualize themselves winning a race or achieving their personal best, focusing on the joy and sense of accomplishment that comes with it. MS keeps athletes focused on their specific goals. MS enhances commitment and drive toward achieving that goal because the athlete is emotionally engaged (Gregg et al., 2005).

. ***Cognitive-General (CG)***

CG aims to improve overall strategies and game plans. An example of CG is an athlete mentally rehearsing a game plan, understanding various scenarios, and how to respond to them, such as strategies for a football game. CG helps plan, strategize, and enhance decision-making skills and adaptability during competitions (Gregg et al., 2005).

Cognitive-specific (CS)

CS training is beneficial for perfecting specific skills or techniques. For example, a hockey player could visualize a power play, focusing on the precise execution of each move, or a basketball player could mentally practice free throws to enhance technique and performance. CS improves technical proficiency and helps master specific elements of a sport or performance (Gregg et al., 2005).

Benefits and Uses of Imagery

Imagery in all of its forms has been proven quite repeatedly to be beneficial to athletes. Imagery is vital because it increases performance and learning. Imagery enhances the thoughts and emotions critical to athletes' performance and can boost confidence and motivation. Finally, imagery is implemented by all successful world-class athletes, as it gives them the mental edge all athletes are seeking (Williams & Krane, 2021). Rather than discuss why imagery is beneficial, as demonstrated, this curriculum will look at effective imagery implementation.

Orlick, in his work *In Pursuit of Excellence*, lays out a formula for the optimal use of imagery. Step one is to create imagery of an ideal situation. This ideal situation can include various goals, from winning a game, to making a team, or breaking a world record. Define the skills and coping strategies needed to achieve this ideal goal or situation. The second step is to practice these skills and strategies in actual training settings. Practicing in physical sessions will allow the athlete or performer to become accustomed to using these skills and strategies and incorporate them into various situations, responding as necessary. The third step is to use these acquired and practiced strategies in simulated competition, allowing the athlete to experience and solidify their use under higher-stress situations. Finally, once the skills and strategies are a natural part of the individual's training and response systems, they can be applied to high-performance events (Orlick, 2016).

Conclusion

Imagery is a versatile and nearly mandatory tool in sports psychology. It aids athletes in multiple ways, from managing anxiety and boosting motivation to refining skills and improving strategic thinking. By incorporating different types of imagery into their mental training, athletes can enhance their mental toughness and overall performance. Theoretical frameworks such as Mental Practice Theory, Functional Equivalence Hypothesis, and Bioinformational Theory

provide the foundation for understanding how and why imagery works. By categorizing imagery into motivational and cognitive types, athletes can tailor their mental rehearsal to meet specific needs, whether managing anxiety, perfecting techniques, or strategizing game plans. The practical implementation of imagery primes athletes for success and fosters the mental toughness required to excel under pressure, rendering it an essential part of any mental skills curriculum.

Week Eight Mental Skills Training: Performance States

Introduction

All athletes seek to find the perfect balance between energy, arousal, excitement, anxiety, and focus. This week's mental skills curriculum explores performance states and the factors that create an ideal physiological and psychological state for enhanced performance and engagement. Various theories on performance states, such as the Inverted-U Hypothesis, Drive Theory, Catastrophe Theory, Multidimensional Anxiety Theory, and Individual Zone of Optimal Functioning, highlight the complexity and importance of managing arousal and anxiety.

Understanding these theories helps recognize how insufficient and excessive arousal can impact performance. The curriculum also examines the stress process, which involves the individual's perception of stressors, their coping mechanisms, and the resulting physical and mental health outcomes. Effective management of this process is crucial for optimal performance. The curriculum includes cognitive-behavioral techniques, relaxation methods, and imagery and visualization exercises to support athletes. These interventions help athletes manage anxiety and arousal, maintain focus, and build confidence, ultimately enhancing their performance.

Theories Related to Performance States

Inverted U Hypothesis

The inverted U hypothesis posits that performance improves with increased arousal to an optimal point, beyond which further arousal results in a decline in performance. Optimal performance is thus achieved at a moderate level of arousal. This hypothesis underscores the importance of maintaining a balanced level of arousal to achieve peak performance, as both insufficient and excessive arousal can be detrimental. The limitations of the inverted U

hypothesis are that it is considered too simplistic and does not account for cognitive anxiety, only somatic anxiety (Horn, 2019; Williams & Krane, 2021).

The Drive Theory

The drive theory proposes a linear relationship between arousal and performance. According to drive theory, increased arousal enhances performance, particularly for well-learned or simple tasks. The theory emphasizes that as arousal levels rise, so does performance, without considering the potential for a decline, especially in routine tasks requiring minimal cognitive effort. Drive theory is again limited by its simplistic nature and lack of consideration for cognitive input, individual responses to stress, and other factors. It is a rigid theory of arousal and performance (Horn, 2019).

Catastrophe Theory

Catastrophe Theory (Hardy, 1990) extends the Inverted-U Hypothesis by incorporating cognitive anxiety. It suggests that performance declines sharply if physiological arousal continues to increase beyond the optimal point, particularly under high cognitive anxiety. The Cusp Catastrophe Model of Anxiety and Performance (Hardy, 1990) effectively illustrates this relationship, showing how even a slight increase in arousal beyond the optimal level can lead to a sudden and significant drop in performance. This model provides a nuanced understanding of the interaction between arousal, anxiety, and performance.

Cusp Catastrophe Model

The Cusp Catastrophe Model is notable for its dynamic, individualized approach and focus on the detailed nature of the anxiety-performance relationship. However, the butterfly CAT model (Hardy & Parfitt, 1991) is preferable as it considers the moderating factor of self-confidence and the difficulty of demands on the performer. Self-confidence plays a

significant role in managing anxiety, helping to buffer the negative impacts of high arousal and cognitive anxiety, thus maintaining performance levels under stress. However, it is important to note that the CAT model is not a theory. Woodman & Hardy (2007) state, "The catastrophe model is not a theory; it does not explain why anxiety and performance might be related in this complex multidimensional fashion." However, because the butterfly catastrophe model acknowledges the role of self-confidence, it has been proven to help develop interventions that utilize self-confidence and increase ability perception (Horn, 2019; Williams & Krane, 2021).

Multidimensional Anxiety Theory

Multidimensional Anxiety Theory (MAT) (Martens et al., 1990) distinguishes between cognitive anxiety (mental) and somatic anxiety (physical) and the relationship they both have with impacting performance. According to MAT, cognitive anxiety is negatively related to performance, while somatic anxiety follows an inverted U relationship with performance. If a performance coach were to explain MAT to their athlete, they would recommend that cognitive anxiety should always be reduced. In contrast, somatic anxiety should be optimized until the performer begins to feel negative impacts. (Horn, 2019; Williams & Krane, 2021). Because MAT does not consider the positive effects of cognitive anxiety, it has not received the support of later theories.

Attentional Control Theory

Attentional Control Theory (ACT) ((Eysenck et al., 2007) is an information-processing theory. As such, it distills the emotion and cognitive awareness required for performance and minimizes them into a transactional theory (Eysenck et al., 2007). Many believe that anxiety is a heavily nervous state, one with elevated levels of emotional dysregulation, and that performance is impacted negatively as a by-product of this emotional dysregulation. Yet, ACT does

hypothesize that anxiety can be related to positive performance (Eysenck et al., 2007). The theory considers the potential positive impacts of anxiety on performance, which is helpful to athletes and SPPs alike; therefore, ACT is included in this curriculum.

Individual Zones of Optimal Functioning

Hanin's theory (1980 & 1986) on Individual Zone of Optimal Functioning (IZOF). IZOF is an approachable theory with a simplistic explanation. IZOF acknowledges that each individual has anxiety, and when they perform, their anxiety is higher. As such, utilizing anxiety for successful performance requires identifying the performer's Zone of Optimal Anxiety. IZOF is included here because it considers individual performance states and focuses on positive outcomes. IZOF also does not automatically link anxiety to a negative performance. Horn (2019) writes that the IZOF theory has practical utility, and research on this theory supports the hypothesis that each athlete has a unique zone of optimal performance.

Relationship Between Arousal, Anxiety, and Stress

Arousal

Essential for all human functioning, arousal is a physiological and psychological state of being awoken or stimulated. Internal and external factors can influence it and affect performance. Williams & Krane (2021) define arousal as " a generalized physiological and psychological activation of the person, with neural excitation varying from deep sleep to extreme excitement. (Pg 212). Arousal influences energy, excitement, focus, and motivation and impacts the nervous system, causing physiological responses that impact psychological responses. The body's process of processing these signals is explained below in the stress process section. Arousal is absolutely necessary for psychosocial and psychological functioning on any level, as well as for training

and performance. The goal of the Sports psychology practitioner is to teach the athlete how to manage arousal to enter into zones of optimal performance.

Anxiety

Anxiety is a negative emotional state with feelings of nervousness, worry, and apprehension associated with activation or arousal of the body. According to Horn (2019), anxiety occurs when a valued goal is threatened. Anxiety is not an optimal performance state, as discussed in Attentional Control Theory (ACT) (Eysenck, 2009). ACT explains how stimuli influence the human attentional system and how it operates from the bottom up. Normally, there is a balance between these stimulus-driven and goal-directed attentional systems. However, when a person experiences anxiety, this balance is disrupted. Anxiety lowers the effectiveness of the inhibition function, making it harder to maintain focus on goals and allowing distractions to interfere more easily. In less theoretical terms, anxiety is what occurs when the body identifies stressors as a threat and reacts with a negative emotional and physical response. Performance and mental performance coaching aims to teach athletes to recognize anxiety responses and train themselves to respond to these responses as a positive influence on performance. (Horn, 2019, Williams & Krane, 2021).

Stress

Stress is when external or internal demands disturb the body's equilibrium. Lazarus & Folkmam (1984) defined stress as " a physical, mental or emotional factor that causes bodily or mental tensions. Stresses can be external factors from the environment, psychological or social situations, or internal factors from illness or a medical procedure" (Dai et al., 2021, p.2). Stress is based on the interaction between an individual and a social situation, where an individual weighs

the demands placed on them. If they decide the load outweighs their resources, they will experience stress (Dai et al. 2021).

Stress Process

Arousal, anxiety, and stress all work together to create what is called "the stress process." The Stress Process: According to Dai et al. (2021), the stress response is complex and comprises five elements. The stress process works in this sequential manner: events occur that could potentially be stressful, the individual conducts a primary assessment of the event, then a secondary assessment of the event, then the individual engages in coping behaviors, and then they experience the "consequences of physical and mental health" (Dai et al., 2021, p. 2). To better understand the stress process, here are the definitions of cognitive assessments, both primary and secondary: Primary assessment is the initial evaluation of the significance of a stressor as either positive (challenge) or negative (threat). (Dai et al., 2021. The secondary assessment is the subsequent evaluation of whether or not the individual can manage the stressor. Secondary assessment involves considering resources and options available and personal ability to manage the stressor. (Dai et al, 2021). Coping strategies are any problem-solving strategy such as a refocusing plan, trigger or cue words, breathing relaxation strategies, or a focus and concentration strategy such as imagery/visualization. Consequences on physical or mental health can be varied, and the result will be directly related to the coping strategy used.

Importance of Symptom Interpretation

Symptom interpretation plays a significant role in how the individual proceeds through their stress response. If symptoms are perceived as positive (aka, somatic symptoms are perceived to mean that the body is ready to race, fight or play, the stress response has a much more positive impact on an individual, and the secondary cognitive assessment is one of

recruiting positive coping strategies (Williams & Krane, 2021). Dai et al. (2021) write that research on cognitive assessment and stress response shows that if an athlete perceives the stressor via the primary assessment as manageable or changeable (within their control), they will utilize problem-focused coping. If the cognitive assessment reveals the stressor as out of their control (i.e., unchangeable), they will use an emotion-focused coping mechanism. The secondary assessment is when this decision is made, so secondary cognitive assessment is important in determining coping strategies (Dai et al., 2021).

Self Confidence

Another factor that plays a very significant role during this stress assessment response is the perception of ability (Dai et al., 20201) or "self-confidence." If an individual perceives their ability to be high. "Competence perception is an important determinant in secondary assessments." In addition to confidence, perceptions of social support also " can indirectly affect avoidance responses through reduced threat assessments and increased control assessments (Dai et al., 20201, p.2). In other words, a strong sense of ability and social support allows performers to respond to a stressor as a challenge and use problem-solving coping strategies rather than avoidant ones.

Types of Anxiety

Understanding the types of anxiety is important because it allows the athlete/performer to identify and manage their symptoms. Williams & Krane (2019, p 212) write, "Prior practitioners providing any form of intervention, an accurate assessment of the experiences of the stress process, and its consequences should be undertaken. To help the athlete complete this assessment, one must understand the types of anxiety that impact the stress process. There are four types of anxiety, the first two refer to when an individual experiences anxiety. State anxiety

is a temporary emotional state or condition that varies in intensity. State anxiety is situational and can fluctuate over short periods. It is often related to activity or what the person is doing now (Williams and Krane, 2021).On the other hand, is trait anxiety, a personality characteristic that reflects a tendency to perceive situations as threatening. Trait anxiety is relatively stable over time. Individuals with trait anxiety will most likely experience it during non-athletic or performance-related pursuits. (Williams & Krane, 2021).

Two more types of anxiety, somatic and cognitive, refer to how a person experiences their symptoms of anxiety. Somatic anxiety is physical symptoms of anxiety (e.g., increased heart rate, sweating). (Williams & Krane, 2021). Cognitive anxiety is the psychological symptoms of anxiety (e.g., worry, negative thoughts) (Williams & Krane, 2021). Understanding these four types of anxiety and how they interact allows the sports psychology practitioner to create a specific intervention that will be beneficial for each athlete depending on how and when they experience their anxiety and allow them to do so without completely inhibiting arousal.

Interventions

Cognitive Behavioral Therapies

Cognitive-behavioral techniques are helpful when an athlete struggles with cognitive anxiety and whether they have the trait or state-induced anxiety. Types of behavioral interventions to be used with athletes include thought stopping, which is interrupting negative thoughts to reduce anxiety. (Horn, 2019). Cognitive restructuring is a powerful technique that helps athletes identify when their somatic symptoms are causing cognitive anxiety. It teaches them to reframe these thoughts or restructure them to interpret them as positive symptoms that their body and mind are ready for competition (Williams & Krane, 2019). Self-talk is another powerful cognitive technique that requires preparation. The athlete creates a script of a series of

mantras or cue words that are positive affirmations used to get their mind on a positive focus track to boost confidence. self-talk needs to be highly individualized based on the task at hand. Fortunately, the SPP can meet with the athlete/ coach to determine which cues and self-talk skills are beneficial in specific training and performance scenarios.

Relaxation Techniques

Multiple relaxation techniques have been proven effective for reducing and controlling cognitive and somatic anxiety in athletes and performers. The research on these techniques is widespread; many lay people use them to fall asleep or reduce their work, family, or other stress. These techniques include progressive muscle relaxation (PMR), the systematic tensing and relaxation of muscle groups. PMR involves tightening muscles throughout the body (intentionally) and holding them in their tense state. Then, when the individual releases the tension, they can experience a deep state of relaxation, which can familiarize them with the relaxed state they seek to achieve before an important performance (McCallie et al., 2006). In *The Mind Gym,* Gary Mack (2001) talks endlessly about the importance of a completely relaxed body and how if all the muscles are relaxed and ready for action, the mind can take over, allowing the athlete to find their effortless flow state.

Breathing Exercises

Breathing Exercises are another intervention that can help the athlete control their anxiety and achieve desired arousal levels. Numerous breathing exercises can help athletes and performers gain control of their somatic anxiety, as well as their cognitive anxiety. These include box breathing, counting breaths, and many other strategies. Orlick (2001) talks about the importance of dialing in breathing, one breath at a time, to gain control of one's body and mind. "Breath, relax, focus, and take your next step" (p.251). This simple mastery over the most basic

of body functions allows the athlete to regain control over their somatic and cognitive anxiety, no matter the stress of the situation.

Imagery and Visualization

Using mental imagery to rehearse successful performance and coping strategies has been shown to help reduce performance anxiety before it begins. Imagery has been discussed in the previous chapter of this curriculum, and all the strategies presented in week seven are applicable here as interventions for anxiety reduction.

Conclusion

Achieving peak performance requires understanding the interplay between arousal, anxiety, stress, and focus. This week's mental skills curriculum has explored the importance of maintaining optimal arousal levels and effectively managing cognitive and somatic anxiety. Understanding how these elements interact within the stress process, including the primary and secondary assessment of stressors and the development of coping strategies, is crucial for athletes to stay focused and engaged during their activities.

The interventions covered, such as cognitive-behavioral techniques, relaxation methods, and imagery and visualization exercises, provide practical tools for managing arousal and anxiety. These strategies are beneficial for any working with athletes and performers to assist them in maintaining optimal performance, building confidence, and ensuring athletes can perform at their best under pressure. By applying these insights and techniques, athletes can enhance their mental toughness and thrive in their respective sports or activities.

Week Nine Mental Skills Training: Handling Performance Errors and Setbacks

Introduction

As humans, athletes make mistakes. It is an unavoidable and beautiful part of being human in the world of sports. How athletes handle performance errors and setbacks defines who they are and who they can become as athletes. The job of the mental performance consultant (CMPC) is to give athletes the tools to handle errors and setbacks. Hence, they become learning opportunities, rather than stumbling blocks and walls to development and greater success. To successfully manage setbacks, resilience, and grit are indicators of an athlete's ability to learn from their mistakes (Bigg et al., 2015). After exploring resilience and grit and how an athlete can develop these skills, this curriculum will examine techniques for handling errors and setbacks. Techniques include breathing, relaxation, mindfulness, meditation, a refocused plan, and emotional regulation tools. To summarize the importance of this discussion, a quote from Orlick captures the importance of managing setbacks: "People who become the best at what they do experience setbacks, fatigue, fear, stress, and self-doubts, just like anyone else. However, at some point on their journey, they develop effective focusing skills that free them from letting go of negative thoughts and refocusing on the positive ones" (2016, p. 272). What follows is a thorough discussion of effective focusing skills.

Feedback

According to Willimas & Krane (2021), "errors can be a function of technique, physiological deficiencies, inaccurate or delayed decision making, drill design or psychological factors" (p.30). This host of reasons for errors means there is a high potential an athlete will make an error, and they will. The possibilities for error are endless; "the appropriate intervention strategy will be different for each possibility, correctly identifying the true cause of the error is

critical to the performance enhancement process' (Williams and Krane, 2021), p. 31). So, how can an athlete identify the cause of the error? Perhaps they can do it alone. Perhaps a coach can help, and certainly, a CMPC can provide insight into the cause of the error. Initially, it is recommended to have the athlete reflect on their performance and walk themselves through the process. Orclick (2016) recommends having the athlete review each performance after to process the sequence of events. "Feedback provides learners with insights into their performance, enabling them to identify mistakes and adjust their movements with the appropriate force. It can be administered before, during, or after performance and can employ various methods and techniques. Feedback enhances proper techniques, eliminates incorrect behaviors, and boosts learners' motivation to practice and outperform their peers" (Hassan et al., 2023). Feedback is how athletes and performers learn to identify, adjust, and improve performance errors and setbacks.

Variables: Girt, Resilience, Hardiness

How the athlete handles the feedback depends on personality variables impacting them throughout their athletic career. Athletes with resilience, grit, and hardiness are more successful in the long run (Horn, 2019). Resilience "reflects a person's ability to cope with stress and trauma"(Horn, 2019, p.381). Grit "reflects passion and perseverance for long-term goals (Horn, 2019, p 381). Hardiness, "reflects a life of commitment, control, and challenge (Horn, 2019, p. 381)." Interestingly, research has examined the role of grit, resilience, and hardiness in athletes with disabilities, and found that these three psychological characteristics play a significant role in predicting sport and life engagement in athletes with disabilities (Martin et al. 2015). This research speaks to the power of these psychological traits to allow an athlete to persevere and overcome nearly any trial or setback sports and perfromance may present them. Grit, resilience,

and hardiness have been studied as the three contributors to “psychological endurance” and are necessary for athletes to maintain their training, work, and striving efforts despite setbacks, errors, mistakes, stress, and pressure. Teaching athletes to cultivate these characteristics would be its own curriculum, but at any time, a CMPC and coach can encourage an athlete to embrace and develop these characteristics (Biggs et al., 2023). Identifying, giving feedback to athletes on their use, and encouraging the further incorporation of these three characteristics should be a focus in teaching athletes to train to endure setbacks and mistakes and maintain their love of sport.

Mindset

How an athlete copes with adversity, and their mindset also play a large role in managing setbacks and performance errors. An athlete with a growth mindset (Dweck, 2015) will see errors as an opportunity to learn and improve. Orlick (2016) presents a very powerful reframe where athletes can be taught to view mistakes as opportunities. “ A setback within a game or performance ([...] making a mistake or failing to perform your best when it counts most) can drag [you] down, but it can also serve as a positive reminder to focus fully on the next step, redirect [...]energy] more positively and productively, and analyze errors at the appropriate time” (p. 263). This attitude embodies the growth mindset in sports.

Growth vs. fixed mindset concepts introduced by Carol Dweck (2012) focus on the human perception of their ability. A growth (or incremental mindset) is one where the person believes they can change, develop, or improve an attribute or ability with work, practice, and effort. Research on mindset has repeatedly shown that “people who endorse an incremental mindset are more likely to “respond to setbacks adaptively because they reason that the failure is a result of factors that they can change through effort and hard work” (Horn 2019). The impact of this mindset on an athlete learning from and growing from their mistakes and setbacks cannot

be understated. A growth mindset can be taught, but slowly and over time. Athletes who already demonstrate this mindset should be encouraged at every opportunity to continue developing their incremental mindset and coached on how to use it to make the most of their mistakes.

Timing of Intervention

It is important to note that feedback or reflection is not always encouraged right after a mistake is made or during an important performance. Orlick (2016) suggests not analyzing errors immediately after they occur but later after the performance. This reflection can be achieved through a meeting between player and coach, player and CMPC, CMPC, and team, or even journaling by the athlete as they reflect on their performance following the event. It is important, however, that the reflection is done close to after the game, as all the plays, actions, mistakes, successes, errors, and techniques used are freshest immediately after the performance.

What can be done to refocus the athlete in the moment of error? The athlete can be taught breathing exercises, relaxation, mindfulness, and refocusing techniques. Breathing techniques such as box breathing, diaphragmatic breathing, and the simple counting of breath are effective in helping athletes manage stress and maintain focus. This technique can be used during a performance, especially if the athlete is on a team and not constantly engaged in activity the entire performance. However, even a golfer can use the techniques in between shots or a tennis player in between sets. There is always time to focus on breathing, making it a powerful tool for the athlete to cope with setbacks.

Relaxation Techniques

Relaxation Techniques, such as progressive muscle relaxation (PMR), can be taught and used during pre- and post-performance routines. This technique, like music, cannot be used during the performance, but it can be added as part of a pre-post-performance ritual and used to

help the athlete focus, concentration, and mindset (McCallie et al. 2006). However, a technique such as PMR can be effective because it puts athletes in greater touch with their bodies. If they have had practice feeling relaxation, when a coach shouts “relax” at them during a game, or before a free throw, their body now knows what state relaxed is, and there is a greater chance they can recreate relaxation during performance. For this reason, all athletes should be taught muscle relaxation skills.

Refocusing Skills

Refocusing is a powerful performance skill every athlete should have in their toolkit. Orlick writes, ”An effective refocusing reminder can be a simple word, thought, breath or image. Find something that works for you and practice using it before, within, and after an event” (2016, p.243). A cue or trigger word allows the athlete to regain focus and control over their body and mind. An additional helpful element to a refocused plan is when an athlete has used mental preparation or imagery to visualize every possible scenario in a performance. If they have done this effectively, they have considered their response to each situation and how they would best react. As part of their refocusing plan, they choose the practiced and performed response and fully engage in the activity moving forward.

Emotional Regulation

Athletes have higher cortisol and arousal levels based on their chosen profession! When focused, these characteristics can result in highly focused performance. When derailed or unfocused, these characteristics lead to emotional dysregulation, anger, and mistakes. Multiple theories have been discussed, and all seek to explain how to determine optimal arousal levels. But, how can an athlete gain control of their cortisol and arousal when these skyrocket and begin to impact performance negatively? Emotional regulation is a strategy that can be taught, and it

involves the athlete using mindfulness to become aware of their emotional state. Once they are aware, they can accept their emotional state and use this awareness to choose and take action. In the case of heightened emotions and extreme arousal, the athlete will want to use emotional regulation strategies to regain control of their emotion. Orlick (2016) gives a tangible example of a player who experienced emotional outbursts that caused him to break his tennis racquet in fits of anger. He was taught to recognize this anger and channel it to "constructively direct[. . .} his burst of energy into the next rally, to focus on reading and reacting to hustle more, to move faster and to smash harder" (P. 263). This emotional regulation approach involves shifting the focus of arousal from the negative to the positive so the athlete can benefit. The goal is not to eradicate the high level of arousal, but rather allow the athlete to become aware of it and use it to their advantage.

Imagery

In the Mind Gym, Gary Mack states, "Overthinking often leads to overtrying" (2010, p. 177). This statement emphasizes the importance of an athlete cutting off any rumination before it begins. What can the athlete do instead of ruminating? Imagery offers a powerful alternative. If the athlete has a moment to focus on their mistake and finds themselves stuck in a negative mindset, they can use imagery to gain control of how the thought process proceeds. The athlete imagines the mistake or performance error in pictures to do this. They walk through the entire play up until the point of error. Then, instead of completing the play with the error, they visualize themselves completing it, passing or shooting correctly, and visualize the desired outcome. This way, they have taken control of their mind's process. As learned in the chapter on visualization, the mind cannot tell the difference between a vivid visualization and an actual physical action, so

imagining the play going according to plan allows the athlete to take control of the mind's focus and gain the upper hand on any further rumination.

These techniques are effective because they can be taught, practiced, and applied. They have been discussed at greater length in previous chapters. However, these techniques are effective strategies for athletes following a mistake, when arousal is too high for effective performance, or when their mindset needs readjusting.

Conclusion

This chapter of the mental skills curriculum highlights the importance of teaching athletes effective skills to handle performance errors and setbacks. By developing resilience, grit, and hardiness, athletes can turn mistakes into learning opportunities. Techniques such as breathing exercises, relaxation, mindfulness, refocusing plans, and emotional regulation provide practical tools to stay focused under pressure. Imagery is one final tool that successful athletes must incorporate as it gives them the power to rewrite the story of their past performance and focus on the positive. These strategies not only boost performance but also enhance overall psychological resilience.

Week Ten Mental Skills Training: Using Technology and Assessments

Why Performance Tools

Sports, especially any fast-paced, multiplayer sport, require an extended ability to observe, comprehend, and act on multifaceted situations where there may be dozens to hundreds of cues at the athlete all at once. “At elite levels, these perceptions must be based on moment-by-moment tracking, especially as attacking play regularly involves concerted efforts to move along unpredictable paths to deceive defenders temporarily. Sports science research has established that how an athlete perceives and reacts to stimuli is a crucial element of top-level competitive sports ” (Faubert & Sidebottom, 2012, p. 86). So, in addition to being physically capable and ready to compete, mentally prepared, calm, focused, and concentrated, the athlete can also make a split-second moment decision., while their brain is processing excessive information. This task does not sound easy, no matter the athlete’s skill. So, enter performance tools, via assessment and technology. However, before diving into the endless tools available, looking at the importance of the client-practitioner relationship allows all aspects of Mental Skills Training (MST) to be put in the correct order and perspective.

Client/Consultant Relationship

A trusting and safe relationship is the most important tool any Certified Mental Performance Consultant (CMPC) or Sports Psychology Practitioner (SPP) has to offer their client. Research has even demonstrated how individuals improve without a specific intervention, but simply from being in a healthy relationship with their counselor (Prochaska, 2014). While the SPP and CMPC are not counselors, they do follow certain ethical guidelines (Association for Applied Sport Psychology (AASP), American Counseling Association (ACA), & American Psychological Association (APA), all governing and licensing bodies which require training,

behavior, and relationships meet the highest ethical standards for care. As part of these ethical guidelines, confidence and loyalty to the client are paramount. “The effectiveness of psychological interventions is closely tied to the relationship quality between the athlete and SPC (Williams & Krane, 2021, p.361). Research also indicated that “the ability to build rapport and create a positive environment is highly correlated with successful sports psychology interventions” (Wiliams & Krane, 2021, p.361). So, as a CMPC, the initial goal is to build that rapport and then move forward using assessments and additional tools, once the relationship has been established within the boundaries of a positive relationship. In addition to the effectiveness of a positive and trusting relationship, it is quite important to know that “the most successful SPCs are those who know the research and applied literature and subsequently make every effort to implement only evidence-based interventions’ (Williams & Krane, 2021, p.362). This initial road map of a positive relationship, rapport, trust, and following evidence-based practices is very straightforward in showing how a CMPC/SPP can successfully help their clients with mental performance. After these basic relational foundations are established, it is appropriate to introduce types of performance tools.

Types of Performance Tools

Neuro & BioFeedback

Bio/Neuro Feedback are on the cutting edge of sports technology. Both interventions can help athletes recognize, control, and modify physiological and neurological functioning. Biofeedback increases an athlete’s physical awareness of heart rate, breathing patterns, etc. Neurofeedback uses an EEG to assess brainwave function and can be used to train the athlete’s brain to enter more optimal mental states.

A research study showed that "Neurofeedback training (NFT) can indeed be an effective tool to consider in the sports domain, to induce changes in Heart Rate Variable (HRV) and cognitive parameters" (Domingos et al., 2021). Alfani et al. (2024) recently studied the effects of NFT and neuromuscular feedback on athletes with ankle pain and instability. Their result shows that both approaches are highly effective for improving ankle ability. Study after study has demonstrated the effectiveness of both biofeedback and neurofeedback on improving athlete's focus and recovery: "Results of the studies considered showed that neurofeedback can lead to faster reaction times, more sustained attention, and better emotion management, contributing significantly to athletes' performance. Furthermore, it is emphasized that neurofeedback could be combined with other techniques such as motor imagination to maximize effectiveness in precision sports training" (Corrado et al. 2024 p. 1). As a CMPC, not using one of these feedback techniques would mean missing a huge opportunity to give clients an advantage in their physical and mental training.

Wearables

Wearables have made a recent impact on the field of sports. Every casual, weekend warrior athlete has one and most, if not all, elite and Olympic athletes. These range from heart rate monitors to watches, Bluetooth bike transponders to Oura Rings. The list of wearables is endless.

Virtual games

Virtual Reality/ Video Games also provide an exciting opportunity for training for athletes. If an athlete can find a video game that mimics the movement and reaction time of their sort, this game can be used as practice for reaction time, eye speed, and coordination. This fact

may be shocking to many, as video games have a bad reputation in society, but they do work to allow athletes to transfer skills from games to competition (Williams & Krane, 2021).

Mobile Apps

These mini phone-based training sites abound! Keeley et al., (2015) discuss the role technology plays in the lives of so many younger athletes and performers, and how they have grown to rely on it daily. A practitioner is missing a large opportunity to incorporate a platform that the athlete may enjoy if unfamiliar with the most recent apps and hottest trends in online training. Keeley et al. (2015) are pro-mobile App, but they do encourage that "For best practice, make sure you [clinician] review the app's content with evidence in the literature as well as with your clinical experiences. We strongly recommend educators review the app before endorsing it for student use" (p. 197). This recommendation clarifies the SPP's obligation to their client for due diligence and ensures that an app is evidence-based, useful/ safe/effective for each client.

Psychometric Assessments

Testing athletes: there are multiple psychometric assessments, ranging from the State-trait Anxiety Inventory (STAI), (Spielberger et al., 1993) to the Five Facet Mindfulness Questionnaire (FFMQ), (Baer et al., 2006) to the Test of Performance Strategies (TOPS) (Thomas et al., 1999). These assessments have a very valid role in a performance consulting relationship. However, they should never take the place of an intake. Personal questions and sharing in a safe space are much more effective at establishing the rapport discussed above. Hence, it is up to the practitioner to ensure these assessments are used appropriately and for the best results with their athletes (Williams & Krane, 2021).

Consideration of Benefits for Clients

The question then arises: which tool is a good fit for which client, and when should it be introduced? The first step begins with observation of the athlete in their sport. The second is to meet with the athlete and have them discuss their goals, successes, and struggles. Third, the athlete must be asked if they want to use an online/additional assessment tool. Finally, searching for an appropriate performance tool begins after preparation and discussion. If athletes have indicated they like video games, an eye tracker or fast reaction game could be beneficial. If an athlete wants to track their progress with their running splits, a more advanced watch is beneficial. An athlete who aims to lift heavy in the offseason and before spring training camp can utilize many of the strength and weight trackers available online. This question of what is appropriate for each athlete speaks to the importance of having a CMPC/SPP who has a relationship with an athlete and will work to find a tool that is just right for this individual. Anyone can go to the APP store or Google training plans, but the harsh reality is this tool may be unhelpful, inaccurate, or even cause injury. The benefits of a personal relationship with a CMPC are endless, and choosing the right technology for the athlete's concern is one more benefit that must be considered!

Ethical Concerns and the Role of CMPCC

There are ethical considerations for involving any outside sources, platforms, and spaces where data will be entered into and tracked on a platform. The onus is on the SPP/CMPC to identify evidence-based programs proven to be safe, confidential, and effective. This process also requires informed consent and sharing a list of potential risks with the client. Additionally, the APA seeks to add the additional competency of technology as a foundational element of their training and licensure. While CMPCs are not beholden to the exact APA guidelines, it would be in their best interest to carefully track and follow APA guidelines regarding technology, as "justice, nonmaleficence, and beneficence" are three core ethical

guidelines. Further discussion of "the development of technology competency as a foundational competency broadly would provide individual training programs better guidance and flexibility in describing how the elements of technology competency should be benchmarked in their training program, given the specific range of professional activities at that point in time (Weisenmuller, 2022)." In essence, this expectation of competency will offer an avenue for all practitioners to develop technological competencies and ensure effectiveness and confidentiality while any number of tools are in use by clients.

Conclusion

In conclusion, utilizing performance tools in MST offers significant benefits for athletes, enhancing their physical and mental capabilities. These tools provide diverse avenues for improving performance, from neuro and biofeedback techniques to wearable technology, virtual reality, mobile apps, and psychometric assessments. However, the effectiveness of these tools is deeply intertwined with the quality of the client-practitioner relationship. Building a trusting and positive relationship is paramount, as it lays the groundwork for successful interventions and ensures that the CMPC can choose tools to benefit each client. Ethical considerations, evidence-based practices, and personalized approaches ensure athletes receive the best support. By integrating these tools within a robust client-practitioner framework, CMPCs and SPPs can significantly enhance athletes' mental performance, contributing to their overall success and well-being.

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