Mental Skills Training Curriculum

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Chapter 1

Developing an Athletic Identity

Athletic Identity Overview

The concept of athletic identity in sport is described by both Brewer et al. (1993) and Edison et al. (2021), as the level to which an individual identifies with their athletic role, which can have both positive and negative effects. Studies suggest that athletic identity can peak and fluctuate for individuals over time, but in other cases, prolonged participation over a long duration results in higher levels of athletic identity (Edison et al., 2021). Brewer et al. (1993) suggest that athletic identity works as an Achilles' heel, or weakness, when a person relies too closely on that role. For example, a once highly motivated starting point guard on a varsity basketball team may deal with depression and anger after recovering from a long-term knee injury that puts them out of the rest of the basketball season if they have a strong athletic identity with this role.

Sport Ethic and the Pursuit of Excellence

Hughes and Coakley (1991) suggest that a sport ethic is understood by many athletes as being the criteria for defining what it takes to be considered a real athlete. An athlete needing to love the sport above all else and prove it by sacrificing other interests is just one example (Hughes & Coakley, 1991). In the fire department of New York City for example, most members expect new probationary firefighters to prove their buy-in by showing up to all company outings, be the first one to arrive and last one to leave, work majority of the major holidays, and do all the grunt work within the firehouse, such as being the first one to the sink to wash dishes. Next, Hughes and Coakley (1991) say that an athlete is understood to want to strive to be the best or to stand out, whether that means winning or being close to perfect. In the fire service, this can translate to avoiding mistakes at all costs because if you fail, it could mean the difference between whether or not a person lives. Athletes may believe that they have to push through their own limits to be accepted (Hughes & Coakley, 1991), such as a situation common in fire service culture which is to have another drink, even if you do not want to, just because you want to be

accepted. Lastly, Hughes and Coakley (1991) speak to an athlete's attempt to limit any perceived threats that would impede achievement.

Orlick (2016) talks about the pursuit of excellence versus the pursuit of outcomes. Someone who may be more task-oriented may be inclined to strive for a pursuit of excellence, whereas another person who may be more ego-oriented may strive for a pursuit of outcomes. An example could be a basketball player who only cares to beat a team, even if it means they have to play dirty or cheat — even if the journey towards winning was not the best performance, what matters is they won. On the other hand, a firefighter can focus on the pursuit of excellence and focus on mastering each event and problem one at a time, even if it means the outcome is that someone dies.

Mental Skills Training (MST)

Mental skills training, or psychological skills training, are different cognitive and emotional techniques that can help athletes achieve higher performance by improving attention focusing, positive imagery, relaxation, and psyching-up strategies, just to name a few examples (Marquardt et al., 2019). Williams and Krane (2021) explore comprehensive mental training programs that use goal-setting, arousal control, anxiety management, imagery, confidence, self-talk, concentration, and routines. The effectiveness of such training can be connected to studies conducted by Meyers et al. (1996) and Brown and Fletcher (2017), which concluded that there were in fact psychological and psychosocial effects on sport performance enhancement. Teaching mental skills training for enhancing performance stems from a performance enhancement approach while dealing with personal and emotional problems is more directly relevant for a clinical approach (Williams & Krane, 2021).

Marquardt et al. (2019) conduct a study on mental preparation strategies and their effects on firefighter performance under stress. It appears that mental skills training can help athletes

and firefighters alike focus on a more task-oriented approach (Marquardt et al., 2019). To put things into perspective from my own personal experiences, a firefighter with less experience and time on the job can absolutely have more performance anxiety and perceived stress at a fire than someone with more experience and time on the job. On the other hand, maybe someone who is new to the fire service previously served in the military and has developed adaptive ways to handle stress and may be better able to keep focused and reset after setbacks on the fire ground than someone with more time on the job who has not been to a fire in a long time. Firefighting can be overwhelming in the beginning, as it was for me, because you are required to make split-second decisions and process a lot of information in high-stress situations. By focusing on setting specific and measurable goals, practicing my inner self-talk to be more compassionate, and learning to relax in stressful moments using breathing, routines, and tactical resets, I have been able to work on my self-confidence which has impacted my performance positively.

Death is a real factor in the work a firefighter does, whether it is dealing with patients who pass away or our own fellow firefighters who pay the ultimate sacrifice and do not come home. A person with a strong athletic identity in their role as a firefighter may find it harder to recover from a loss or from a mistake than someone who has a more balanced approach towards athletic identity and can recognize their humanness with more compassion and non-judgment. Working on mental skills training interventions can help firefighters to build on mental readiness and confidence. I believe that being more task-oriented in motivation can help firefighters move forward after a line-of-duty death or civilian loss.

Chapter 2

Creating Performance Routines

Performance Routines

Stress is an ongoing exchange between environmental demands and a person's available resources, while strain is a result of when demands exceed resources (Hanton et al., 2011). Performance anxiety is a form of strain and is defined by Cheng et al. (2009) as an unpleasant psychological state reaction to a perceived threat to the performance of a task under pressure. According to Weinberg and Gould (2019), establishing performance routines can focus concentration and can be extremely helpful in mental preparation for an upcoming performance. Moran (1996) defines a pre-performance routine (PPR) as a sequence of task-relevant thoughts and actions which an athlete engages in systematically prior to their performance of a specific sports skill. PPR's have been studied as to whether or not they can help athletes transfer their attention from task-irrelevant thoughts to task-relevant thoughts while simultaneously decreasing performance anxiety (Hazell et al., 2014). Weinberg and Gould (2019) suggest that routines increase the chances that athletes will not be distracted before and during performance.

Pre-Competition Routines

A coach in a video provided by the University of Western States (UWS; n.d.) encourages his players to consider pre-competition routines as funnels: they start wide and increasingly become more narrowed and focused but must me adjustable. The coach continues to inform his players that in practices, athletes should incorporate a training mindset, and then on game day, incorporate a trusting mindset in which your body and mind automatically trust your preparation (UWS, n.d.). A pre-competition routine does not necessarily only begin right before a competition but can begin days in advance. Weinberg and Gould (2019) add to this by stating that athletes have routines varying from short and simple to complex and lengthy.

In my own personal experience, for example, prior to heading into the firehouse for a 24-hour tour, I have developed a system at home that helps me mentally prepare. I always pick clothes to wear and set them up for when I will get ready the next morning, that way, the mental work as to what to wear and whether it will fit well or be ready to go will already be dealt with. I do one breathing technique for about ten minutes once I am about to start my car, just so I can focus on the here and now. To take this a step further, once I arrive at the firehouse, I make sure to set my gear up exactly the same way every single time, whether that is the first moment I get in for a tour, or every time I undress and reset my gear. I always check my radio's battery and what channel it is on before I leave my gear to do anything else, so that when a run comes in, my radio is always ready to go. Whenever we get a call for fire, I run to my gear, take one deep breath, and put my gear on the same every time: boots, suspenders, fasten pants, radio turned on, coat over. Once I sit on my seat on the rig, I incorporate 2-count box breathing as I continue the rest of my routine, which is hood, waist strap, flashlight, shoulder straps, then gloves. Once my gloves are on, I clap them together as a way for me to signal to my mind and body that I am ready and that I am present.

In-Competition Routines

Ravizza (2012) challenges athletes to take one thing at a time, separating different components from one another in their lives. He believes that in-competition routines require multiple funnels of routines, in which you can begin to focus on one task at a time or one moment at a time, rather than looking at the complete competition as a whole, in other words considering a process versus outcome approach (Ravizza, 2012). To simulate this notion, Ravizza (2012) uses a form of narrow-external drills by asking the viewer to focus on his finger for a few seconds, then tells the viewer to let it go and release the focus, then to repeat these

steps in other ways such as inflicting moderate pain to your arm while still maintaining that same focus.

According to Williams and Krane (2021), effective concentration is being able to focus on the right things at the right time and in the right way. Total immersion in the present is considered the best form of concentration (Williams & Krane, 2021). The ability to shift attention depending on the changing performance demands is another factor in effective concentration. From a firefighting standpoint, I will often find myself taking deep tactical breaths to reset my focus onto what I am doing, especially when my breathing becomes increasingly labored or when I am fumbling with my tools and feel like time is speeding up. The deep breath allows me to slow things down when everything is happening quickly, which allows me to take myself out of my mind and more focused on the action required. For an athlete in powerlifting, for example, a suggestion could be to focus on one single thing or place attention to internal cues like breathing or bracing the abdomen before a lift so that they can focus on the movement as opposed to the crowd and noise. Each activity requires its own funneling routine technique.

Post-Competition Routines

Focusing on basic skills while one's physiology may increase significantly is a challenge an athlete often faces (Williams & Krane, 2021). According to Williams and Krane (2021), mindfulness may be described as deliberate compassionate awareness of present-moment thoughts, feelings, body sensations, and the environment. Wegner and Erber (1992) explain that attempting to control or suppress undesirable thoughts can make them ironically very accessible under stress. High performance in sport is concluded to require mindful awareness of task-relevant external cues; nonjudgmental and non-reactive awareness of internal thoughts, feelings, and physical sensations, and clarification of values paired with values-based behavior (Gardner

& Moore, 2004). When it comes to post-competition routines, it is very important to use this as an opportunity to debrief and reflect on the things that worked out well and what did not, without judgment.

For example, how I utilize this routine is that I print out the ticket for which the run was for. I write down all information I know about that specific run: time of day, type of building, position I was riding, what tools I brought, where I went, what I did, what thoughts came up, and what my Whoop data was. By relying on biofeedback data, I have begun to compile a visual journal that allows me to make sense of how my performance can be explained by physiological and psychological factors. The more information I can gather, including any photographs or videos of the event, the more I can better prepare for the next event.

Developing PPR's

Cotterill (2011) suggests a five-step approach to creating effective PPR's:

1. Recording performance — being able to see yourself and notice your already current routines on recorded video.
2. Clarifying behavior meaning — determining your awareness of the routines you already have.
3. Developing focus and function for each behavioral component — executing your PPR behaviors and discussing the meaning and function of each.
4. Routine construction and agreement — defining what it is that you are seeking to achieve in the preparation period and choosing a relevant trigger word.
5. Practice — Integrating these PPR's into regular practices.

Routines and Performance Readiness Worksheet

Routines and readiness consist of four main areas:

Preparation: This is technical skill, tactical strategies, physical readiness and psychological readiness.

Resilience in handling setbacks and performance errors: Positive adaptation to adversity, setbacks and performance errors.

Intensity, energy and drive: The level of physical activation needed at the start of a competition.

Focus and concentration: The width and direction of one's mental focus; mindfulness

Intensity and focus are linked and interact with each other. A certain level of activation and intensity is required for attention and focus, and every sport and every athlete is different.

This all starts with setting specific goals for each area, identifying internal obstacles, and behaviors to overcome these obstacles.

Readiness Plan:

Preparation: Technical, strategic, physical & psychological readiness for training and competition

1. Goal_____
_____
2. Obstacle_____
_____
3. Behavior_____
_____

Resilience and coping with adversity: Positive coping with performance challenges, setbacks, and errors

1. Goal_____
_____
2. Obstacle_____
_____

3. Behavior_____
_____

Intensity: Physical activation for optimal performance

1. Goal_____
_____
2. Obstacle_____
_____
3. Behavior_____
_____

Focus: Concentration on the most important parts of the task at hand and being able to shift attention when needed and letting go of distractions

1. Goal_____
_____
2. Obstacle_____
_____
3. Behavior_____
_____

Chapter 3

Self-Talk

Self-Talk

Williams and Krane (2021) explore the relationship between thoughts and confidence by suggesting that positive self-talk or how we think about ourselves is key in influencing confidence, feelings, and ultimately performance. Self-talk is a common coping strategy in elite athletes (Gould et al., 1993). Beginning to understand how one's mind works and noting what thoughts come up throughout the day or before, during, and after an event is an important first step. Developing a stronger sense of honest self-awareness can aid in connecting the dots between what one thinks, how these thoughts affect one's feelings and actions, and how the mind can be more disciplined (Williams & Krane, 2021). Research in the William and Krane (2021) text has demonstrated that positive self-talk interventions have enhanced self-confidence and have shown an improvement in performance among elite athletes.

Using the self-talk script development form, athletes can identify the seven purposes for script development in order to direct their attention towards why they want to work on self-talk to begin with. The second section of this form allows athletes to create their own sentences and belief statements that they can refer back to or say out loud to themselves on a daily basis. One can use a countering approach, which is termed as your internal dialogue that uses facts and reasons to refute the underlying assumptions and beliefs of negative thinking (Williams & Krane, 2021).

Envision someone you love, and you are either a coach or just a friend or family member. How would you talk to them if they were to make a mistake? Would you have compassion for them and encourage them, or would you yell at them with disgust? Positive self-talk does not mean that you have to force yourself to not say anything negative, but it is an invitation to be your own inner coach and reframe how you perceive yourself in a more motivational and

productive way rather than beat yourself up. It can be a way to build your game based on how you can bounce back quickly after setbacks, deal with challenges, prepare for the unknown, or debrief after a performance. I challenge you to begin to notice what thoughts come up in your mind throughout your next performance whether in practice or in competition. What doubts and negative things did you tell yourself? Did you do your absolute best with the resources you had in that time, or are you really as terrible as you believe? What was in your control and out of your control?

Personal Experiment

One strategy I experimented with was a self-talk log, which is a technique that allows a person to monitor and analyze thought and behavior patterns in practice (Williams & Krane, 2021). For one full 24-hour tour that I worked, I followed the exercise and recorded the self-talk that went on in my head during any specific runs. For any major fire runs, I created a Google Doc form to fill out which included the address, timestamp, and any pertinent information such as where the fire location or emergency was, what I did, and what the result was. I also included data that was recorded on my Whoop app in regard to my heart rate and breathing.

Example One – Fire in a Non-Fireproof Multiple Dwelling (NFPMD)

- Position: Ladder Company 136 – Outside Vent Firefighter.
- Assignment on the ticket: Second due ladder company.
- Type of run on the ticket: Caller states fire on the second floor of a three-story NFPMD.
- Assignment upon arrival: First due ladder company.
- Size-up upon arrival (what did I see): Heavy smoke pushing from the second-floor windows. Window bars present. Building is attached on both sides. Alleyway on the left side, two buildings down.

- What my task is: Get to the rear, provide horizontal ventilation for the inside teams operating on the fire floor. Share information via radio about what exists in the rear.
- What I did: Grabbed a 24’ portable ladder, halligan hook, halligan, and 6” blade angle grinder. Carried tools to the alleyway. Noticed a large gate with substantial lock and chain. Cut the chain. Made entry to the rear of the neighboring building but realized I had no access to the rear of the main fire building. Made a transmission that I would be delayed to the rear because there was no clear access from the left side alley. Made my way to the right side of the building and tried to gain access from that side. No shot. Went back to the fire building, gained access through the first floor into the rear. Continued to vent and search for victims.
- Self-talk that occurred:

  -Before: on the rig, I told myself I got this. I played out the tools I needed and what my potential plan would be. I was confident and felt ready.

  -During: oh shit, we are first due, we are not second due. People are waving us in. I need to get to the alley. Fuck, the gate has a lock. My angle grinder is taking too long to cut. I’m taking forever. Okay, it’s open thank God. Fuck, I can’t get to the fire building, there’s a wall. I need to tell them, but they’re gonna think I don’t know what I’m doing. I’m delayed. I’m in trouble.

  -After: I could have done better. I acted based on the information and resources I had available in that moment. I did my absolute best.

SELF- TALK SCRIPT DEVELOPMENT

DIRECTIONS: To truly change your self-talk, you'll want to have a specific script and pre-designed affirmations that speak directly to success in your chosen performance area. On Section 1 below, you'll see the 7 possible purposes of self-talk. Identify the specific purposes that your self-talk script is being designed to attain by selecting each selected purpose that you want to emphasize. When constructing your script, you must select a minimum of three purposes, but you may select all seven if you like! Next, for each purpose, construct specific thoughts, affirmations, or counterarguments that convey the nature of that purpose for you. In Section 2, you'll find examples of ideas and affirmations that might be useful for each purpose, but it's always best if you write them in a way that best suits you. For example, if you'd never actually say "I'm a talented person with skills and abilities that allow me to be as successful as I want to be in life," use that idea to construct something that you would actually say like "No matter how tough things get, I've got the ability to work through them and be successful." You should also feel free to borrow quotes or mantras from other sources (e.g., poems, books, slogans). Remember, this is about what works for YOU – this is part of the risk-taking you're being asked to do for the PPEP. How would you want your future clients to attack this worksheet?

Section 1: Purposes for Script Development

1. Remind yourself of your assets, strengths, and desirable personal qualities
2. Establish priorities and goals as well as action plans for how to achieve them
3. Recall past successes, particularly in similar situations or when overcoming obstacles, failure, or adversity
4. Emphasize the quantity and quality of your preparation
5. Appraise all situations as challenges rather than obstacles and implement effective problem-solving strategies.
6. Reframe negative thoughts
7. Attribute success to hard work and improving ability; attribute failure to something controllable (the need to work harder, improve mental prep, or develop skills more fully)

Section2: Sample Positive Thoughts, Affirmations, and Counterarguments

1. Remind yourself of your assets, strengths, and desirable personal qualities:

   (a) I'm a talented person with the skills and abilities that allow me to be as successful as I want to be in life.
   (b) My background and past experiences are irrelevant because today offers me a fresh start to explore my full potential
   (c) My intelligence and physical skills along with my dedication and sacrifice will allow me to become a success in sport and life
   (d) I have the ability to overcome all obstacles and roadblocks in my life with hard work, dedication, and perseverance
   (e) Ultimately, I'll be judged by "who I am" not "what I accomplish"
   (f) I have the ability to make myself into a better performer who can help my team in many ways

(g) I celebrate today by looking my best
(h) I enjoy good health, energy, enthusiasm, and vitality today
(i) I'm a happy person who radiates positive energy and enthusiasm. I love to smile.
(j) I have rich, rewarding relationships with my close friends and family
(k) I like who I am and enjoy being me. I like the person I see in the mirror
(l) My body is a wonderful vehicle for full and free self-expression
(m) All my thoughts, words and actions are creative, dynamic and powerful
(n) I am an open channel for the greater expression of excellence and creativity.

2. Establish priorities and goals as well as action plans for how to achieve them:

(a) I have a dream or vision of what I want in life
(b) I see myself as successful – having everything I want in sport/life and achieving all of my goals
(c) My goal is to become the best I am capable of becoming
(d) I have set my goals, established my priorities, and developed action plans to make them a reality
(e) Nothing good comes easy. The best things in life require hard work, dedication, and sacrifice
(f) Dreams become reality through hard work and sacrifice
(g) I have the time, energy, and wisdom to accomplish all of my goals
(h) I dare to dream ways to turn my career and this team around
(i) His is a "can do," "will do," and "get things done" day.
(j) Today I am taking control of my life and making sure I achieve my high priority goals
(k) I eat nutritiously and exercise regularly in order to keep my body fit and healthy
(l) I will use more and more of myself until eventually I more fully achieve my own potential.

3. Recall past successes in similar situations or how you overcame adversity:

(a) I have been successful in similar situations in the past
(b) Even though this is a difficult challenge, I have overcome equally difficult obstacles in the past and I can do it again.
(c) Failure makes me stronger by helping to identify areas for improvement
(d) I know it's only a matter of time until my hard work pays off and I become even more successful
(e) Nothing succeeds like success and I've had a lot of successful experiences in this type of situation that give me the confidence to be successful again today.
(f) Overcoming failure and adversity requires a commitment plan effective strategies to eliminate my weaknesses

4. Emphasize the quantity and quality of your preparation:

(a) Nobody works harder than I do, and at crunch time I'll be in better condition and more willing to pay the price than my opponent

(b) My physical, mental, technical, and tactical training were carefully designed to prepare me perfectly to excel today
(c) No one will ever out-work me in practice. I take great pride in my work ethic and it's a great source of confidence when encountering adversity.
(d) My coach has taught me to understand my opponent's game and I have the ability to counter those tactics successfully
(e) I have prepared myself well to maximize my strengths and minimize my weaknesses
(f) I get a little bit better every day in practice, moving a step closer to being the best performer I can be

5. Appraise all situations as challenges not obstacles problem-solve effectively:

(a) Everyone encounters failure and adversity. Champions rise above adversity by viewing problems as opportunities for excellence
(b) I recognize that mistakes are a normal part of learning. As long as I'm learning and trying to get better, mistakes are inevitable. I will look at each mistake as an opportunity to learn and grow as I strive for excellence.
(c) I will approach each problem as a challenge – an opportunity to learn and get better as a person and as an athlete
(d) No matter how bleak the outlook or how difficult the obstacle, I will accept the challenge to perform my best and come up with a strategy that will allow me to be successful
(e) I realize that true fulfillment comes from looking at every situation as a challenge to take another positive step forward toward reaching my potential
(f) I'll approach today as an opportunity to become interested in and make something creative and special out of every situation, no matter how difficult or mundane.
(g) I take constructive criticism well, using that feedback to make myself a better person and athlete

6. Reframe negative thoughts:

(a) "Labeling is disabling" so I'll accept myself and others without judgment
(b) I'll concentrate on doing my best right now because I can't change what has happened in the past or what may happen in the future. All I can control is giving my best effort to strive for excellence at this moment.
(c) I can only take responsibility for myself and my own actions.
(d) I accept what I can't control. I can't control other people's opinions of me or how my teammates play. I can't control my given ability or how quickly I learn skills. I can't control the officiating. I CAN control my effort level, attitude, mood, and performance. I'll concentrate on what I can control.
(e) Life is often unfair. I'll concentrate on the things I can control and on doing my best in those situations. Persistence and problem-solving pays off.

7. Attribute success to hard failure to effort of need for improvement:

(a) I am responsible for my own success – my hard work and effort have paid off
(b) Working hard and trusting my ability allows me to continue to achieve success as I progress up the competitive ladder
(c) I know my hard work and consistent practice have paid dividends and allowed me to achieve success
(d) This failure is temporary and can be overcome with hard work and persistent skill development
(e) Failure will not get the best of me. I know that momentary lack of success can be overcome through effective problem-solving
(f) All failure is surmountable with enough time, patience, hard work, and problem-solving.
(g) When confronted with failure, I focus on the things I can control such as trying harder, getting better prepared mentally, developing my skills more fully, or trusting the abilities I've worked so hard to build.

SMART TALK GENERAL SCRIPT DEVELOPMENT FORM

DIRECTIONS: Now that you've read Chapter 14 in the text and looked over Sections 1 and 2 above, use this form to develop your personal script for your chosen performance area. In the sections below, write out each of the purposes you have chosen to focus on along with the specific thoughts, affirmation, or counterarguments you have developed to achieve that purpose. You may have many statements for a single purpose, or many purposes with a few key statements for each one – whichever you like. Come up with powerful statements for the beginning and ending of your script – these can be quotes, mantras, or statements you've used in the past that really motivate you to achieve your best. Finally, transfer these short statements into paragraph form – a fully written script to read or record for yourself. You will submit the completed version of this handout and your final Self-Talk script as part of the requirements for Checkpoint #2, due at the end of Week 5.

EXAMPLE:

Purpose #1*:*

Reminders of strengths and weaknesses

Specific Thoughts:

1) I have the ability, dedication and work ethic to excel in whatever I do

2) I am a talented person with skills and abilities that allow me to be successful

3) All my thoughts, words, and actions are creative, dynamic and powerful

LET'S GET STARTED!

Introductory Statement:

Purpose #1:

Specific Thoughts:

1)

2)

3)

4)

5)

Purpose #2:

Specific Thoughts:

1)

2)

3)

4)

5)

Purpose #3:

Specific Thoughts:

1)

2)

3)

4)

5)

Purpose #4:

Specific Thoughts:

1)

2)

3)

4)

5)

Purpose #5:

Specific Thoughts:

1)
2)
3)
4)
5)

Purpose #6:

Specific Thoughts:

1)
2)
3)
4)
5)

Purpose #7:

Specific Thoughts:

1)
2)
3)
4)
5)

Conclusion Phrase, Statement:

Chapter 4

Goal-Setting and Goal Implementation

Goal-Setting

Locke and Latham (2002) formulated the mechanistic theory which aims to explain how goals can influence performance in four different ways. Goals direct a performer's attention and action to the importance of a task (Williams & Krane, 2021). By setting goals, performers also begin to mobilize their efforts. Goals can be useful in increasing immediate effort and persistence. Performers can also use goal-setting to develop and employ new learning strategies. There are three types of goals one can set out to accomplish: outcome, performance, and process (Cox, 2011). Outcome goals represent focusing on the results of a contest or beating someone; performance goals focus on improvements relative to one's own performance; lastly, process goals focus on something that an athlete will engage in during performance (Williams & Krane, 2021). Rares-Mihai et al. (2021) studied four different sports performance factors when classifying target behaviors in goal-setting: technical, tactical, physical, and psychological.

Athletes can exhibit either of the two kinds of achievement goals: mastery (task) involvement or ego (result) involvement (Tenenbaum & Eklund, 2007). Task-oriented focuses on competency and improving one's own performance, while ego-oriented focuses more on one being able to outperform others or winning. When developing a plan to achieve one's goals, coaches must consider goal difficulty, goal specificity, goal proximity, and goal collectivity (Rares-Mihai et al., 2021). Following these guidelines and incorporating both short- and long-term goals have proven to be effective.

Enhancements to Motivation, Self-efficacy, and Confidence

According to Burton (1983), goal-setting involves an athlete's levels of anxiety, motivation, and confidence. Essentially, if an athlete solely focuses on an outcome or success orientation, which defines success on social comparison and winning, unrealistic future expectations can result (Williams & Krane, 2021). This leads to lower levels of confidence,

increased cognitive anxiety, decreased effort, and poor performance. Burton (1983) also suggests that a performance orientation is when an athlete defines success based on learning and self-improvement which can be more controllable and flexible. This leads to forming realistic expectations, and when performed successfully, leads to optimal levels of confidence, cognitive anxiety, and motivation (Burton, 1983). A failure orientation is described by Burton (1983) as a combination of success orientation and a low level of self-efficacy, or belief in oneself to accomplish a goal.

SMART Goals

According to HumberEDU (2017), SMART goal-setting techniques are:

- Specific
- Measurable
- Attainable/Action-oriented
- Realistic
- Timely (HumberEDU, 2017).

Are the goals you are setting specific and targeted? How will you consider measuring the objective and whether or not you have accomplished that goal? Do you have a schedule attached to what you are trying to accomplish? These are some guidelines you may use to help formulate your goal achievement plan.

Barriers to Goal Achievement

Common barriers to goal-setting include perceived lack of time, stress, fatigue, social relationships, injury, and a lack of confidence (Williams & Krane, 2021). Setting too many goals too quickly can lead to negative results. It may be easy to become overwhelmed and eventually lose interest if there are too many things to focus on without specific priorities. Goal-setting requires an individual's autonomous commitment because forcing athletes to set goals is

ineffective and not all athletes will want to do this. Once goals are set, it is encouraged to readjust and reevaluate their progress and effectiveness. Goal-setting takes time to implement. Those who assist athletes in forming goal achievement plans must create a supportive atmosphere and positive communication style (Williams & Krane, 2021).

Goal-Setting Worksheet

While over the course of your athletic career you have probably set and achieved a number of goals**,** it is a topic that **you** do not want to overlook or take for granted. Therefore, this section of the sport psychology workbook is dedicated to goal setting and will look at the three types of goals, why goals are important, and how to properly set and achieve your goals.

There are three major types of goals and to be an effective goal setter it is important that **you** know and use all three types. The first type is *outcome goals*. Simply put**,** outcome goals are used to measure the result of a performance (i.e. winning this game). They are extremely important and are the basis **for** many decisions, but they are the goals that **you**have the least control over because **you** cannot control our opponent's performance.

A second type of goal is *performance goals* which focus on your own improvements relative to your previous performance (i.e. stealing 30 bases this season). Performance goals look at how well you performed and are based on your motivation, action, and achievement. They are under your control because you have complete control of your actions.

Finally, the third type of goal is called *process goals,* which means the actions that you perform during the course of the game (i.e. keeping the front shoulder closed). Process goals allow you to focus on the actions or steps of a good at-bat, or quality pitch, which in turn lead you to reaching your performance goals.

While many competitors try to focus only on positive outcomes, it is the process and performance goals that create or lead to these positive outcomes. Although, the *outcome*of winning is obviously very important, it is by focusing on the *process* it takes for you to *perform* your best that is really the most effective way to help your team win.

Now that we have focused on the types of goals, let's shift our attention to why goals are important to your success as a ballplayer. There has been lots of research conducted on goal setting and several themes have emerged. One, athletes who set *specific goals*instead of "do your best goals" improved their performance more. Two, goal setting has been used to *effectively change behaviors*. Lastly, goal setting is an effective way to *enhance performance*.

Over the course of a long season goals can also be used to *increase motivation*. If a goal is reached then there is an opportunity to set a more challenging goal and see if it can also be reached. Goals also help facilitate and track improvement in others areas, such as injury rehabilitation, progress through spring training, and in general areas of your life such as diet, exercise, and sleep. Overall, the use of goal setting before and during the season provides you with a way to determine your overall level of performance.

Using the information that you have just learned about goals, there are some simple rules that apply to setting and developing a goal setting program. If you follow these simple procedures then you are on your way to beginning a successful goal setting program.

1. Set goals in specific measurable terms. Instead of "do your best" goals need a way to be measured. For example, hitting .275 for the season or leading the league in ERA.

2. Set difficult yet *realistic* goals. Goals that are unreachable actually lead to a decrease in motivation, therefore set goals that challenge your ability but can be attained if you put in the effort.

3. Set both Long-term and Short-term goals. Baseball is a long season and some of your goals may not be completed until the last game of the year. Therefore, set short-term goals that can be accomplished daily, weekly, and monthly so that you have a way of determining your progress toward reaching your long-term goals.

4. Set goals for practice and competition. This is very important in that you should never go to the field without a goal in mind. Practicing without a goal has no purpose and is ineffective. Whether it is pre-game BP or live action always have a goal in mind.

5. Record and evaluate your goals regularly. Too often players set several goals in the pre-season only to put them away and never be seen again. Once you have identified your goals post them somewhere, your locker, bathroom mirror, refrigerator door as a constant reminder of why it is important to work hard everyday. Also, spend time on a regular basis (i.e. weekly) evaluating your progress. This allows you to determine what goals have been met, adjust goals that may have been unrealistic, and determine if you are moving in the right direction.

Overall, goal setting is one of the most valuable mental skills that you can use as an athlete. Only you can control the effort and intensity of your performance. Goals allow you to determine if that intensity level needs adjustment or if you are moving along successfully. Goals also help you to increase your motivation over a long-season and allow you to set benchmarks for your performance. Take the time to set goals in an effort to enhance your performance.

Now take a moment to write down your goals in each area. You may have outcome goals for the season but focus on performance and process goals for each. Remember, process is what you have the most control over.

Season Goals:

1._____

2._____

3._____

Hitting Goals:

1. _____

2. _____

3. _____

Pitching Goals:

1. _____

2. _____

3. _____

Fielding Goals:

1. _____

2. _____

3. _____

Base Running Goals:

1. _____

2. _____

3. _____

Personal Goals:

1. _____

2. _____

3. _____

Chapter 5

Mental Toughness

Mental Toughness

Traditionally, society may perceive toughness as being "hard, rigid, stiff, unbreakable, gritty, firm, rough, or powerful" while its opposite may be described as "soft, fragile, flimsy, tender, weak, sentimental, easy, or light." A famous quote Billie Jean King is famous for is, "Pressure is a privilege." In developing my own definition, I think that mental toughness is less about being indestructible and more about how one can get back up or move forward after facing hardship. Sometimes, mental toughness requires us to take a step back and be honest with ourselves when we need help. Maybe we can begin to look at it in a different way such as mental strength or mental flexibility?

In the gym, it may be common to consider yourself tough if you did one extra rep, went longer for your run, or lifted heavier than you had set out. On the other hand, you may consider yourself physically strong by knowing your limitations and knowing when to rest and recover than to keep pushing and keeping your mouth shut about how hard something may be. In my opinion, mental toughness can be more synonymous with adaptability and how an individual can quickly switch gears when those opportunities call for it.

Characteristics of Mental Toughness

The following sections are aimed at different studies that were conducted, which resulted in specific ways to describe what makes an athlete mentally tough. Jones et al. (2002) present what their athletes attributed mental toughness with, while Casstevens (2001) provides a list of seven C's to mental toughness. We will look closely at these below.

Mental Toughness Attributes as Explained by Jones et al. (2002)

I would say that my working definition and applied components of mental toughness relate more to what Jones et al. (2002) describe as a general ability for an athlete to cope with

many demands and the specific ability to remain determined, composed, and focused while under pressure. Mental toughness is a skill that can be developed, and according to Jones et al. (2002) must include achieving success in comparison to one's opponents in order to be a true test of mental toughness. I believe mental toughness can just be a comparison to one's own original abilities: to be able to go above or beyond your normal limitations in an act of courageous effort. One thing that stood out to most of the athletes who participated in this study was the notion that self-belief was crucial and fundamental in the mental toughness process (Jones et al., 2002).

The Seven C's of Mental Toughness

Casstevens (2001) suggests that there are seven characteristics of mental toughness:

1. Competitiveness – One's drive to win.
2. Confidence – One's belief that they can handle whatever comes their way.
3. Control – One's ability to maintain poise, concentration, and emotional control.
4. Commitment – One's ability to be self-directed and stay highly motivated on a goal.
5. Composed – One's commitment to staying focused when handling adversity.
6. Courageous – One's ability to take a risk.
7. Consistent – One's ability to possess an inner strength to keep going.

Developing Mental Toughness

Some ways I would recommend clients to develop and build mental toughness would be to:

- Stay prepared.
- Focus on what you can control.
- Keep your perspective (do not look at something as worse than what it currently is, focus on the now).
- Reflect on your past performances.

- Find a role model or emulate qualities you admire about someone who you believe to be mentally tough.
- Practice generous acts of kindness in your personal life.

Often on the fire ground, I am moved by certain people's ability to keep their composure when things are not exactly going the best direction, and it is inspiring to see how people have moved past (or maybe moved with) their fear while trying to stay focused on a specific task to complete. What is your definition of mental toughness? What qualities would you describe someone to have if you believed them to be mentally tough? I would then challenge you to go deeper into each characteristic you come up with. If confidence is one of the qualities you would say defines someone as mentally tough, then what is your own personal relationship with confidence? When do you feel most confident, and why? When do you feel least confident, and why? Then branch out and think about the ways that you work to build on your confidence.

Insightful Concerns for the Future

What would you say are the differences and similarities between mental toughness and mental health? In a world of sport where there are some of the most elite and mentally tough athletes, why do you think there is still a stigma around mental health counseling and recognizing when one may need it? Is picking the most challenging scenario in practice or out working your body in training the best way to build mental toughness, or should we set more realistic and attainable goals to increase one's confidence and ability in order to develop mental toughness?

Mental Toughness Worksheet

Defining Mental Toughness

The term mental toughness is one of the most commonly used phrases and terms in sports. Coaches, parents, athletes, and even the media frequently refer to the "mentally tough athlete". While this is true, there is little consensus and agreement as to what exactly it means to be mentally tough (Jones, G. 2002). And for that matter how to define mental toughness in a way that provides a working definition that is a useful framework for mental skills training.

A review of the literature reveals that while there is no consensus as to an agreed on definition, there is some consistency in the literature as to the components of mental toughness.

A working definition of Mental Toughness:

> "Mental toughness is a psychological set that provides a belief system, foundation, and core traits for cognitive, affective, and behavioral techniques that leads to consistency, confidence, self efficacy, and coping under stress and pressure that sets elite athletes apart from others in their quest for excellence."

Mental toughness is a mindset that is characterized by cognitive endurance to stay positively focused on one's goals in the face of challenges.

Mental toughness is the acceptance of strong emotions, both positive and negative emotions, and the control and focus of those emotions.

Mental toughness is the consistent and systematic application of behaviors, routines, training, and techniques that push the athlete beyond boundaries in the pursuit of excellence.

Mental toughness is therefore a goal, as much as it is a fixed state, which can be learned and developed over time and training.

Jones, G. What is this Thing Called Mental Toughness? An Investigation of Elite Sport Performers. Journal of Applied Sport Psychology. 2002: 14:205-218.

Chapter 6

Focus, Concentration, and Managing Distraction

Focus, Concentration, and Managing Distraction

According to Williams and Krane (2021), effective concentration is being able to focus on the right things at the right time and in the right way. Total immersion in the present is considered the best form of concentration (Williams & Krane, 2021). The ability to shift attention depending on the changing performance demands is another factor in effective concentration, and an athlete's challenge is to focus on basic skills even when their physiology may increase significantly (Williams & Krane, 2021).

Feldenkrais (1972) suggested athletes should gain control of their muscles, emotions, and thoughts and integrate them into a smooth performance. Awareness requires an athlete's total attention on a task. It is critical for athletes to be aware of what their own individual experience of optimal performance is like, so that they can learn how competitive stress can affect their performance (Williams & Krane, 2021). Once a performer knows what their peak is like, what stressors may affect them, and how their performance is affected, they can begin to develop ways to either refocus their attention or release tension in the moment.

It is common for athletes to focus on the past (mistakes) or the future (potential outcomes) than the present moment (Hermansson & Hodge, 2012). One way to build better concentration habits is by starting to bring awareness to moments when one loses concentration. Moran (2009) stated that athletes must choose to concentrate and pretend there is a switch turned on when concentration is needed and off when not needed.

Nideffer's Attentional Model

Keegan (2014) provides a break down of concentration and focus in sport and performance psychology, touching on Nideffer's Theory of Attentional and Interpersonal Styles (TAIS). Essentially, attention can be seen as a "spotlight" that breaks up into four styles: external-narrow, external-broad, internal-narrow, and internal-broad (Keegan, 2014). Individuals

have a preferred style and often revert to this style when arousal levels are high. Nideffer's attentional model suggests that different performance situations make different attentional demands. It is important for an athlete to begin to understand what is most important to focus on at a particular time and to assess and develop their ability to appropriately shift from one type of attention to another (Nideffer, 1976).

Impacts of Arousal on Attention

The concept of "choking" is described as when an athlete experiences a significant and uncontrollable drop in performance in high-pressure situations in which they cannot regain control without some outside assistance (Williams & Krane, 2021). In this moment, an athlete can focus more on the pressure they are experiencing, the physiological arousal, and attention can become more internal-narrow. The responses our bodies can experience include rushing movements, tightening muscles, timing, coordination, and focus (Williams & Krane, 2021). It may be helpful to not only train how to prevent choking, but also how to deal with and recover after choking occurs. Rather than solely focusing on our inner doubts, we can consider using cues or picking something to focus on and remain task-oriented.

Creating pre-performance and performance routines can assist in managing distractions. According to Williams and Krane (2021), these specific routines can help an athlete cue both the body and mind. Potentially eliminating self-judgment or blaming others when performing an error can help an athlete stay in the right mindset and refocus on imagining success (Williams & Krane, 2021). Mental rehearsal can be used as a way to help work on relaxation and imagery skills which will help an individual to mentally rehearse a sport skill while someone else is trying to distract them.

Concentration Drills Worksheet

PART 1:

Find a quiet space to think about your chosen area for performance improvement. When it comes to your ability to focus during your "performance" in this activity, what types of distractions do you generally experience? Are they internal external, or a combination of both? Are they the result of a lack of preparation, a lack of motivation, building frustrations, a combination of these, or something else entirely? In the space below, describe the results of your personal concentration assessment:

PART 2:

Identify three strategies you may want to practice addressing to deal with distractions below:

Chapter 7

Imagery and Visualization

Imagery and Visualization

I want you to imagine a half-cut lemon. With your eyes gently closed, hold your hand out with your palm facing upwards and imagine the texture of the skin of the lemon. Focus on its bright yellow color. Imagine the weight of the gravity of the lemon making contact with your hand. You bring the lemon close to your nose and you notice the tart, citrusy scent. You squeeze the lemon over your tongue and hear the juices flow out. It tastes sour and fresh. Now open your eyes. What did you notice in your body? For most people I have tried this activity with, they notice their mouths water. Others find it silly and are too embarrassed to even close their eyes in front of their peers and pretend to imagine the lemon. Imagery is using all of your sense in order to create or recreate an experience in the mind (Williams & Krane, 2021).

The External Imagery Perspective and Internal Imagery Perspective

According to Williams and Krane (2021), there are different perspectives one can practice in imagery: an external imagery perspective and an internal imagery perspective. An external perspective is more like an out-of-body, fly-on-the-wall experience in which you view yourself as a highlight reel in real-time, whereas an internal perspective occurs in first-person, almost like you are wearing virtual reality goggles and are the main character in the video simulation (Williams & Krane, 2021). Both have their own benefits in assisting an athlete in preparation for an event. You are able to have complete control in visualization and can even help yourself prepare for drawbacks or potential stressors. Practicing visualization and imagery can help a person consider all pathways to get to an outcome, so much so, that you feel like you have already done it so when it is showtime, you feel a lot less anxious. If practiced intentionally and seriously, an athlete may feel like they are actually doing that action, and their brain may not even be able to tell the difference between a real rep and a mental rep. Visualization must include all of the five senses, be concentrated, and vivid (Williams & Krane, 2021).

The When and How of Imagery

Imagery can be used in practice, pre-competition, and in-performance. An example can be at the firehouse. While doing a daily check of your tools, you pick up a hook and hold it in your hands. You visually inspect it, take a deep breath, and then close your eyes. You imagine yourself in third person getting off the rig, methodically grabbing the hook from its slot. Then your perspective changes to first-person and you are visualizing yourself holding the hook a specific way, walking up six flights of stairs with it, and then thinking about how you would use it in the fire to search for victims as well as overhaul the building material. You consider how shiny the tool looks, how the smoke may smell like, the transmissions you may hear, and maybe think about how dry your mouth may taste when you are nervous or are exerting a lot of force. You finish checking the rig, and now it is go time and you get a call for fire. While on the rig, with your eyes open, you are already creating a plan and referring back to your mental slide deck or highlights of the mental reps you practiced in your mind. You execute, and once you are at the fire apartment, you don your oxygen and face piece, and suddenly, you cannot see, but you feel confident in where your tool is and how to use it even without your sight. You take a deep breath and continue focusing on executing the next task.

Visualization Exercise

I challenge you to recall a memorable moment from your childhood. You have free reign here and be creative. As you are remembering that event, is it replaying in first-person or in third person? Let us try to concentrate on recalling this memory in first-person. What do you physically notice in your memory? What colors can you recognize? Is it bright, dark, blurry? What temperature is it, and what is the environment like? What do you feel in your body as you begin to recall this memory? Now let us change gears and try to envision this same experience

but in third person. How clearly can you perceive your younger self as an out-of-body experience?

Find a quiet room where you can sit comfortably and be unbothered for a few minutes. I want you to think of your most recent performance. With your eyes closed, take one deep breath. Replay your last performance in your mind from an external perspective as if there was game film or a highlight reel of just your performance. Now, do the same, but from an internal perspective. Keep practicing these perspectives and note anything that stands out to you. Continue to practice both methods when visualizing, and you will be able to slowly develop confidence with your own visualization approach and preferences. Both perspectives are beneficial and can be used together. Imagery and visualization can feel clunky and uncomfortable at first, but they are skills that need practice and can make lasting impacts for future performance both in sport and in their personal lives at home. By beginning to explore these concepts in memory recollection, you can eventually become more comfortable with exploring these concepts in creating new memories that have not yet occurred rather than only recreating past performances.

Chapter 8

Performance Stress

Performance Stress

How does stress appear in your body? It is helpful to begin to bring awareness towards the how's, why's, and when's of stress manifesting through our bodily responses: aching muscles, elevated heart rate, sweat, headaches, etc. Williams and Krane (2021) tell us that there are four components to the stress response system. Stage one is the actual environmental demand or stress. The second stage is one's level of train anxiety or perception of that demand. The third stage then speaks to our stress responses (physical and psychological). Lastly, the fourth stage includes behavioral consequences. This helps someone understand why the same stressor can have a different effect on two different people because their own perception of the stress is a huge factor.

Being on the "right side of the curve" is a phrase that has been more commonly used within the American fire service in the last few years. In the inverted-U relationship between arousal and performance, more emotional arousal can result in progressive performance gains up to an optimal level of performance, but anything below that level or beyond that level may result in poor performance (Williams & Krane, 2021). Maybe an analogy could be a highway full of cars. Let us say there is only one road, and the "optimal zone" or the speed limit is 50mph. If you drive at 30mph, you are causing a lot of traffic because those behind you are no longer able to drive optimally and flow well. If you drive at 70mph, you may be endangering yourself and others at sharp turns and would find it more challenging to control your vehicle if there are any sudden stops.

The term arousal can also be referred to as activation, or the overall physical and mental state that is needed by an individual to performance a task (Williams & Krane, 2021). Carrying a bag of groceries from one's vehicle to one's kitchen, for example, requires a specific amount of

activation. On the other hand, anxiety is seen as a negative emotional response to stressors and represent the mental (cognitive) and perceived physical (somatic) components of an activity (Williams & Krane, 2021). Stress can be looked at as demands that exceed an individual's available resources to meet the demand. Stress can exist as physical, mental, or emotional. Let us think about a situation in which you are in the comfort of your own home, and the task presented to you was to move from one room to another. Your perception of the task is probably not too stressful and does not bring up much anxiety because it is something you are familiar with and can do without much thought or extra energy. Let us now say you are still in your home, and the task presented is the same, which is to move from one room to another, but there is a fire in the hallway. Although the task may seem the same, depending on your perception of how well you can deal with the smoke and heat in the hallway, you will perform differently.

The Competitive State Anxiety Inventory 2R (Cox et. al., 2003) is a questionnaire that allows participants to rate their cognitive state anxiety, somatic state anxiety, and self-confidence both in the quiet of their home and right before or right after a stressful event. This can help clients gain insight on bringing up more conscious awareness towards identifying what they are feeling and when they are feeling them based on the physiological responses their body may show when stressed. This chapter challenges you to identify how stress manifests in your physiological responses (sweaty palms, muscle weaken, dry mouth, auditory exclusion, etc.). I want to help clients self-identify what their version of peak performance means to them, that way we can build a better understanding of their own personal physiological responses to stress and anxiety, and manage them by building tools to help them either take a step back from getting on the right side of the curve and get back to center, or help them get a little bit more excited to perform and bring them up to center.

Competitive State Anxiety Inventory-2

Complete the following scale on two separate occasions: during a quiet time before a lesson, rehearsal, or practice when you are fairly relaxed, and then immediately before or after an important performance or competition in which you feel highly stressed.

The following are several statements that performers use to describe their feelings before a performance or competition. Read each statement and circle the appropriate number to indicate how you feel right now—at this moment. There are no right or wrong answers. Do not spend too much time on any one statement.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I am concerned about this performance.	1	2	3	4
2. I feel nervous.	1	2	3	4
3. I feel at ease.	1	2	3	4
4. I have self-doubts.	1	2	3	4
5. I feel jittery.	1	2	3	4
6. I feel comfortable.	1	2	3	4
7. I am concerned I may not do as well in this performance as I could.	1	2	3	4
8. My body feels tense.	1	2	3	4
9. I feel self-confident.	1	2	3	4
10. I am concerned about losing or doing poorly.	1	2	3	4
11. I feel tense in my stomach.	1	2	3	4
12. I feel secure.	1	2	3	4
13. I am worried about performing well.	1	2	3	4
14. My body feels relaxed.	1	2	3	4
15. I'm confident I can meet this challenge.	1	2	3	4
16. I'm concerned about performing poorly.	1	2	3	4
17. My heart is racing.	1	2	3	4

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
18. I'm confident about performing well.	1	2	3	4
19. I'm worried about reaching my goal.	1	2	3	4
20. I feel my stomach sinking.	1	2	3	4
21. I feel mentally relaxed.	1	2	3	4
22. I'm concerned that others will be be disappointed with my performance.	1	2	3	4
23. My hands are clammy.	1	2	3	4
24. I'm confident because I mentally picture myself reaching my goal.	1	2	3	4
25. I'm concerned I won't be able to focus.	1	2	3	4
26. My body feels tight.	1	2	3	4
27. I'm confident of coming through under pressure.	1	2	3	4

Scoring

This scale divides anxiety into three components: cognitive anxiety, somatic anxiety, and a related component—self-confidence. Self-confidence tends to be the opposite of cognitive anxiety and is another important factor in managing stress.

To score the CSAI-2, take the scores for each item at face value with the exception of item 14, where you "reverse" the score. For example, if you circled 3, count that as 2 points.

When totaling your rankings, you will arrive at the following three scores:

_____ **Cognitive State Anxiety:** (Sum of items 1, 4, 7, 10, 13, 16, 19, 22, & 25)

_____ **Somatic State Anxiety:** (Sum of items 2, 5, 8, 11, 14, 17, 20, 23, & 26)

_____ **Self-Confidence:** (Sum of items 3, 6, 9, 12, 15, 18, 21, 24, & 27)

Your scores for each will range from 9 to 36: 9 indicating low state anxiety and 36 indicated high state anxiety.

Chapter 9

Handling Performance Errors and Setbacks

Handling Performance Errors and Setbacks

Before developing skills to manage setbacks in realtime, I think it is important to firstly bring awareness to how a person already perceives performance errors. Creating a journal and documenting how one is feeling directly after an event may be useful. Think to a time you made a mistake. As you recall this memory, what do you notice come up in your body, if anything? Does your stomach start to flutter? Do you begin to tense at your shoulders? What led you to make that mistake? How did you handle it? Was the tone of the dialogue in your mind negative and critical, or supportive and constructive? What do you think of that moment today?

A written reflection exercise can be an opportunity to learn that, sometimes, there are things that are out of one's control and that embracing setbacks and errors can be more beneficial than dwelling on them. No one is immune to making mistakes, and peak performance is less about avoiding mistakes or avoiding losing, and more about moving forward from mistakes and playing to win. Adversities can disrupt normal adaptive functioning or affect the development of systems that allow for adaptive functioning (Yates & Masten, 2004).

Masten et al. (2009) suggest that several factors contribute to resilience, such as the ability to problem-solve, self-regulation, self-efficacy, and a sense of humor. Optimism is one of the primary characteristics of resilience. For clients both in the firefighting field and athletes in sport, I would share the quote said by Muhammad Ali, "It isn't the mountains ahead to climb that wear you out; it's the pebble in your shoe". Often, we face difficulty and adversity and tell ourselves it is too hard to handle, yet we actually hold ourselves back from progress and growth by carrying all of the little insecurities and mistakes we have experienced in the past or worry about controlling the future outcome. By having a growth-mindset, we may hopefully be better able to cope with anything that life may present us.

By creating a baseline of understanding one's current self-talk and what happened during a performance, we can begin to build self-compassion and understanding. Our "best" today may look different from our "best" tomorrow. Through an intentional reflection process (including video footage, photos, and biofeedback metrics such as using a Whoop or other fitness tracker), I believe that athletes can begin to change their perspectives on their mistakes and eventually grow from them so that they may better handle future errors. I would also incorporate different styles of breathing for pre-performance, during performance, and post-performance.

Handling Competitive Stress, Arousal, and Performance Errors

Competitive stress and pressure involves both internal (thoughts, emotions, physical tension, and visualizations) and external (avoidance, focus on coaches, teammates and fans) processes. By developing both internal (self-talk, anxiety and arousal) and external (coaches, teammates, fans) awareness an athlete can better handle performance setbacks, errors, and failures. They can re-direct themselves from the distracting and counterproductive internal dialogue and emotional arousal to a "fix-it" mindset and "play forward" to get to the next play, shot, stroke, etc.

After performance errors athletes will:

1. Re-play the event and either re-enforce or correct the error mentally.

2. Fix the error by pre-playing the next opportunity.

3. Return to the moment and ready for the next play.

An athlete who mentally corrects the error (positive self talk), sees himself correcting the error (visualization), and returns to the moment ready for the next play has a plan to handle competitive failures and be ready for the next play.

1. Verbalize what you will be doing on the next play; use positive self talk!

2. Visualize making the next play; see yourself making the play!

3. Return to the moment, be present and ready for the next play.

With cognitive worry and negative or apprehensive self-talk comes the physiology of stress. Arousal and increased activation increases as athletes dwell on past performance errors or worry into the future about further mistakes. You can decrease anxiety, arousal, and activity by slowing down, taking those relaxing and clearing breaths, and releasing any tension. Simply squeeze your left hand while taking a breath, and exhale while releasing the tension in your hand. Feel the tension leaving your body and out through your fingertips. This will slow down any anxiety and arousal and prepare you to get ready for the next play.

Athletes who are aware of the external lose focus on their play. They are not fully "in the moment" and are focused on how others are evaluating their performance. They are playing "not to mess up" rather than being fully engaged in their play. By Keeping a focus on the flow of the game, and managing performance anxiety and emotions, an athlete can better handle the ups and downs of competition.

Self awareness and having a plan to let go of performance errors and manage competitive stress/ keeps athletes in the game.

Chapter 10

Using Assessments and Technology

Using Assessments and Technology

Technology and assessments in sports can have many benefits for athletes and coaches. Although using technology and assessments may provide greater insight into one's performance in a measurable and concrete way, there can be ethical challenges that come with them. Dyer (2015) suggests that the controversy and use of sport technology can be terms as performance enhancement, techno sport, human enhancement technologies, or mechanical ergogenics. If technology includes questions of unfair or negative use, it can be considered technological doping or techno doping (Dyer, 2015). Some impacts of sport technology can include harm or health to the athlete or others, unnaturalness, an unfair advantage or consideration of fairness, coercion, safety or spectator appeal, integrity of the game of spirit of the sport, dehumanization, excess cost, and equal opportunity or access (Dyer, 2015).

According to Craik (2011), Speedo introduced a fabric called S2000 for the 1992 Olympics, which claimed to reduce the drag of a swimmer by 15%. This fabric led to the introduction of the full-length swimsuit in 1999 (Craik, 2011). In 2000, the "fast skin" swimsuits would only be given to athletes sponsored by Speedo at the 2000 Sydney Olympics (Craik, 2011). Issues that came about during this time were related to whether or not this sport technology was fair, accessible, or too expensive (Dyer, 2015). After years of debate and 43 world records were broken in 40 events at the 2009 World Swimming Championships, it was voted to ban the full-length suits starting January 1, 2010 (Craik, 2011).

One example from my own personal experience is the use of wearable fitness tracking devices in the FDNY. While in the fire academy, 12 of the 330 total probationary firefighters in my class were given Fitbits to wear for the duration of our class (20 weeks). The fitness unit notified us all that they were doing a project in which they wanted to see how much calories a

probationary firefighter typically burns, so that they may experiment with different calorie counting methods with each of the 12 probies. There was a strict rule in the academy which was that we were not allowed to wear watches, unless you were a squad leader, or one of the 12 members issued a Fitbit. A lot of us felt it was unfair because they were able to see statistics and track information while the rest of us were not allowed to.

Informed consent and competency of the devices should be discussed with a client. A client must be able to fully understand the why's behind the use of the technology or assessment, as well as any pitfalls or drawbacks. They must then be provided the option to move forward or to discontinue at any time. For example, an application created by 5K Runner called "Couch potato to 5K" helps beginners running for the first time or even experienced runners returning from an injury to rebuild their capacity to run 3.1 miles over a certain number of weeks. It used to be a free app, so it was accessible to everyone. You could go at your own pace, and were not held to any commitments, but the app was user friendly and included both audible and visual components to the experience. It was encouraging and helped users develop an understanding of running in their own way.

App/Device Name	Category	TYPE	Parameters Recorded	Compatibility
Heart Rate Variability				
Breathe Sync	App	Measure; Record; pacer	HR-BVP; HRV; Resp-R	iOS
emWave	Device**	Monitor; Feedback	HRV	PC / Mac
Heart Rate+	App	Monitor; Record; Feedback; Pacer	HR-BVP; HRV; coherence	iOS
Inner Balance	App*	Monitor; Record; Feedback	HRV	iOS
iRelief	App	Monitor; Record; Feedback; Pacer	HR-BVP; HRV; coherence	iOS
Electrodermal Activity				
GSR2	Device	Feedback	EDA	n/a
Mindfield® eSense Skin Response	Device*	Monitor; Record; Feedback	EDA	iOS / Android
PIP	Device**	Monitor; Record; Feedback	EDA	iOS / Andriod
Temperature				
Alcohol Thermometer	Device	Device; Monitor	Temp	n/a
Body Temperature	App	Measure	Temp	iOS
Mindfield® eSense Temperature	Device*	Monitor; Record; Feedback	Temp	iOS / Andriod
Stress Thermometer™	Device	Monitor	Temp	n/a
Electromyography				
Relax4Sleep	App	PMR script	n/a	iOS
MyoTrac Electromyograph	Device	Monitor; Feedback	EMG	n/a
Multiple Parameters				
BioZen	App*	Measure; Record; Monitor; Feedback	HR-ECG*; Resp-R*; EDA*; EEG*	Android

References

Brewer, B., Van Raalte, J., & Linder, D. (1993). Athletic identity: Hercules' muscles or Achilles' heel? *International Journal of Sport Psychology, 24*, 237-254.

Brown, D. & Fletcher, D (2017). Effects of psychological and psychosocial interventions on sport performance: A meta-analysis, Sports Medicine, 47, 77–99.

Burton, D. (1983). Evaluation of goal-setting training on selected cognitions and performance of collegiate swimmers. Unpublished doctoral dissertation, University of Illinois, Urbana, IL.

Casstevens, D. & Mack, G. (2001). Mind Gym: An athlete's guide to inner excellence. New York, NY: McGraw Hill.

Cheng, W-N.K., Hardy, L., & Markland, D. (2009). Toward a three-dimensional conceptualization of performance anxiety: Rationale and initial measurement development. *Psychology of Sport and Exercise, 10,* 271-278.

Cotterill, S. (2011). Experiences of developing pre-performance routines with elite cricket players. *Journal of Sport Psychology in Action, 2*, 81-91.

Cox, R. (2011). Sport Psychology: Concepts and Applications. McGraw-Hill Higher Education.

Cox, R., Martens, M., & Russell, W. (2003). Measuring anxiety in athletics: The revised Competitive State Anxiety Inventory-2. Journal of Sport and Exercise Psychology, 25, p. 519-533.

Craik, J. (2011). The Fastskin Revolution: From human fish to swimming androids. *Culture Unbound*, *3*(1), 71–82. https://doi.org/10.3384/cu.2000.1525.11371.

Dyer, B. (2015). The controversy of Sports Technology: A systematic review. *SpringerPlus*, *4*(1). https://doi.org/10.1186/s40064-015-1331-x.

Edison, B., Christino, M., & Rizzone, K. (2021). Athletic identity in youth athletes: A systematic review of the literature. *International Journal of Environmental Research and*

Public Health, 18, 7331-7348.

Feldenkrais, M. (1972). *Awareness through movement*. New York, NY: Harper & Row.

Gardner, F. L., & Moore, Z. E. (2004). A mindfulness-acceptance-commitment-based approach to athletic performance enhancement: Theoretical considerations. Behavior Therapy, 35, 707–723. doi:10.1016/S0005-7894(04)80016-9.

Gould, D., Finch, L. M., & Jackson, S. A. (1993). Coping strategies used by national champion figure skaters. Research Quarterly for Exercise and Sport, 64, 453–468.

Hanton, S., Neil, R., & Mellalieu, S. D. (2011). Competitive anxiety and sporting performance. In T. Morris & P. Terry (Eds.), *The new sport and exercise psychology companion* (pp. 89-104). Morgantown, WV: Fitness Information Technology.

Hazell, J., Cotterill, S. T., & Hill, D. M. (2014) An exploration of pre-performance routines, self-efficacy, anxiety and performance in semi-professional soccer, European Journal of Sport Science, 14:6, 603-610, DOI: 10.1080/17461391.2014.888484.

Hermansson, G., & Hodge, K. (2012). Uncontrollable outcomes: Managing expectations at the Olympics. Journal of Sport Psychology in Action, 3, 127–138.

Hughes, R., & Coakley, J. (1991). Positive Deviance Among Athletes: The Implications of Overconformity to the Sport Ethic. *Sociology of Sport Journal*, 8(4), 307-325.

HumberEDU. (2017). *Sport psychology: Goal setting - part 2 of 2*. YouTube. https://youtu.be/HEpwpDIRRMg?si=F9gUql4IyYpg6VPk.

Jones, G., Hanton, S., & Connaughton, D. (2002). What is this thing called mental toughness? an investigation of elite sport performers. Journal of Applied Sport Psychology, 14(3), 205–218. https://doi.org/10.1080/10413200290103509.

Keegan, R. (2014). *Concentration and focus in sport and performance psychology.* Youtube. https://www.youtube.com/watch?v=VwDBDWk0nJ8.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal-setting and

task motivation: A 35-year odyssey.

Masten, A. S., Cutuli, J. J., Herbert's, J. E., & Reed, M. J. (2009). Resilience in development. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 117-131). New York, NY: Oxford University Press, Inc.

Meyers, A. W., Whelan, J. P., & Murphy, S. M. (1996). Cognitive behavioral strategies in athletic performance enhancement. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), Progress in behavior modification (vol. 30, pp. 137–164). Pacific Grove, CA: Brooks/Cole.

Moran, A. (1996). *The psychology of concentration in sport performance: A cognitive approach.* East Sussex, UK: Psychology Press.

Moran, A. (2009). Attention in sport. In S. D. Mellalieu & S. Hanton (Eds.), Advances in applied sport psychology (pp. 195–220). New York, NY: Routledge.

Nideffer, R. M. (1976). Test of attentional and inter-personal style. Journal of Personality and Social Psychology, 34, 394–404.

Orlick, T. (2016). *In pursuit of excellence: How to win in sport and life through mental training* (5th ed.). Human Kinetics.

Rares-Mihai, P., Florina, G., E., & Alexandru, Z. (2021). A systematic review of goal setting interventions to improve sport performance. *Studia Ubb Educatio Artis Gymn, 1*, 35-50. Doi: 10.24193/subbeag.66(1).04.

Ravizza, K. [Virtual Brands Video]. (2012, September 26). *How to use routines to mentally prepare for sports competition part 2* [Video]. YouTube. https://www.youtube.com/watch?v=_HEJ_wCDW94.

Tenenbaum, G., & Eklund, R.C. (2007). Handbook of sport psychology, 3rd ed. John Wiley & Sons Inc.

University of Western States. (n.d.). Week 2 being prepared: Routines for readiness [Video]. Panopto.UWS.

Wegner, D. M., & Erber, R. (1992). The hyperaccessibility of suppressed thoughts. Journal of Personality and Social Psychology, 63, 903–912. doi:10.1037/0022-3514.63.6.903.

Weinberg, R. S., & Gould, D. (2019). *Foundations of sport and exercise psychology* (Seventh edition). Human Kinetics.

Williams, J. M., & Krane, V. (2021). Applied sport psychology: Personal growth to peak performance (8th ed). McGraw-Hill Higher Education.

Yates, T. M. & Masten, A. S. (2004). Fostering the future: Resilience theory and the practice of positive psychology. In P.A. Linley & S. Joseph (Eds.), Positive psychology in practice (pp. 521-539). Hoboken, NJ: John Wiley & Sons.