THE UNEXPECTED OPPONENT: A PSYCHOLOGICAL SKILLS WORKBOOK FOR INJURED ATHLETES

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THE UNEXPECTED OPPONENT: A PSYCHOLOGICAL SKILLS WORKBOOK FOR INJURED ATHLETES

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Abstract

Injury can bring a mix of some positive, but mostly negative emotions and thoughts. Documented in several athlete rehabilitation studies, it is common for athletes to question their ability to compete at the same level again, experience anxiety of re-injury, feel frustration, have low self-esteem, and doubt their return to sport all together (Clement et al., 2015; Johnston & Carroll, 1998; Kunnen et al., 2020; Von Rosen et al., 2018). The Integrated Model of Response to Sport Injury and Rehabilitation (Wiese-Bjornstal et al., 1998) describes that mental skills help athletes cope with the diverse responses to sport injury. This model aims to address the relationship between injury and an athlete’s emotions, behaviors, and cognitive responses (Wiese-Bjornstal et al., 1998). Rehabilitation can take weeks or sometimes months and within the recovery process each athlete will face unique challenges relative to their personal and situational factors. A mental skills workbook for injured athletes provides a way for athletes to educate themselves on mental skills and individualize their recovery process by utilizing certain mental skills that aid in their recovery. The workbook will cover mindfulness, confidence building, imagery, goal-setting, and motivation.

Keywords: Mental skills, sport injury, athletes, rehabilitation
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The Unexpected Opponent: A Psychological Skills Workbook for Injured Athletes

Every athlete wants to be on the field competing, but the risk of competition brings the possibility of injury. When athletes become injured it can be a long, grueling process filled with painful hours of physical therapy, spending extra hours training to bring back fitness and strength, but most importantly sitting out competition for extended periods of time. These are all expected obstacles you will face during recovery; pushing through physical challenges are nothing new. Injury brings unexpected challenges, the mental side of injury rehabilitation. Things like sitting and watching teammates during practice may cause feelings of isolation and longing for competition over time. Physical therapy can cause frustration because the body is no longer capable of performing tasks it once used to, thoughts of doubt and discouragement can begin to creep in. Thoughts might start to sound like, “Will I ever play again?” Instead of preparing each week for a new opponent to face, the unexpected competition is your own body and mind. Mental skills training has been shown to aid in the recovery process for athletes, showing promise in reducing the negative mental effects of an injury (Ivarsson, 2021). In this workbook, you will be introduced to mental skills to use during the recovery process that will increase your mental well-being and help track your recovery. These mental skills can be incorporated into the recovery process and help you reach your return to competition.

What are mental skills?

Mental skills are tools that are used in applied sport psychology. Applied sport psychology is concerned with the psychological factors that can influence athlete behavior and performance as well as the impact of performance on mental states (Williams et al., 2021). In the past decade, athletes at the highest level have taken an interest in applied sport psychology to gain a competitive edge over their competitors. Famous athletes like Michael Phelps, Kobe
Bryant, and even legendary coaches like Phil Jackson have implemented psychological skills and tools to boost performance and improve mental states with athletes. The margins between athletes and teams at the elite level are so slim, some athletes seek to improve their psychological preparation for sport. The use of mental skills in sub-elite athletics have not been as prominent despite research supporting psychological skills training programs (Arvinen-Barrow et al., 2015).

In this workbook, you will learn mental skills specifically applied to the injury context to help you in the recovery process.

How can mental skills help me in injury rehabilitation:

- Reduce re-injury anxiety.
- Improve mental preparation.
- Manage performance anxiety.
- Improve concentration.
- Manage pain and discomfort.
- Increase rehabilitation adherence.
- Increase self-efficacy.
- Increase motivation.
- Increase confidence.
- Increase attentional focus.
- Increase self-compassion.
- Reduce negative self-talk.
- And many more…

Historically coaches have been hesitant to address the mental challenges within the injury context that athletes face, such as performance anxiety, negative self-talk, and confidence issues,
because coaches feel inadequate or there are other barriers to assist those issues (Ferguson et al., 2019; Maurice et al., 2021; Mazzer & Rickwood, 2015). Research on the incorporation and effectiveness of mental skills in sporting environments has attributed to increasing its popularity among coaches and athletes. Although these mental skills can be used to boost performance on the field, they also have applicability to the sport injury context. Performance during recovery is like performance on a field. In a basketball game if you try to dribble with your weaker hand and constantly turn the ball over, you will most likely feel anxious when the ball is in your weaker hand. This repeated failure to perform may also leave you with negative thoughts about yourself. Let’s say you are rehabbing a leg injury, and you are performing box jumps. Previously, you were able to box jump 24 inches easily, but now with the reduced strength and stability of the injured leg, even 10 inches is proving to be difficult to achieve. Negative thoughts and attitudes might develop from this frustration of disparity between performances. Landing the box jump might even cause you anxiety. Thinking about the potential of injuring the leg again can cause a mental barrier to perform your best. Being both on the field and in the rehabilitation room can elicit the same feelings and mental struggles. Likewise, the mentality you use to approach sport can be used in recovery. While most athletes don’t see the connection between the two contexts, creating a similar mindset in the rehabilitation process can be useful for athletes.

**Psychological Stages of Rehabilitation**

Researchers identified three psychological stages you will experience during injury (Clement et al., 2015). Their findings outline how each stage influences your psychological states differently throughout the injury process. The first stage is **realization of injury**. This stage begins from the moment of injury until you begin to take part in a regular rehabilitation routine. For some athletes this stage could last a day, for other athletes they may wait longer due
to surgery or other reasons. Initial appraisals and reactions in this stage are often negative. In turn, these negative thoughts can affect your emotional responses. Negative thoughts and negative cognitive appraisals have a positive relationship, meaning that the more negative your thoughts, the more negative your cognitive appraisals are (Clement et al., 2015). Emotional and cognitive responses drive behavioral reactions (Clement et al., 2015). Exercises in this stage will address the relationship between your thoughts and how that influences your emotional and behavioral response to injury.

The second stage is rehabilitation. This stage begins when a rehabilitation plan is put into place for you until you are cleared to participate in practices even with limitations. Feelings of frustration and questioning the rehabilitation process are common. You may be surprised by the difficulty of the rehabilitation program due to the limitations an injury causes on your ability. Things such as walking, jumping, or other sport related movements that came easy before can become difficult. This may cause a lot of frustration, which then can influence your behavior in several ways (e.g., being extra cautious during rehabilitation, unsure in your current ability, and consistent disbelief you will heal from your injuries). Confidence and motivation may waver in this stage. These thoughts and behaviors may lead you to seek social support from your family, friends, and athletic trainers to continue to gain confidence and belief in your recovery. Exercises in this stage will focus on building confidence and maintaining a positive outlook to stay motivated during rehabilitation.

The third stage is return to sport. In this workbook it is defined as the moment you are cleared by your medical team to start participation in practices or individual drills. There can be a mix of positive and negative emotions in this stage, it is the culmination of the injury recovery process. Stepping back into competition can cause a reflection moment, thinking about
everything that it took to get to this point, both good and bad. When you reach this stage its common to feel a sense of appreciation for your health and a realization that you have grown through the adversity and become more resilient (Clement et al., 2015). This reflective process also may be accompanied by feelings of fear through re-injury anxiety, a lack of confidence, and increased amount of pressure to perform upon returning to sport participation (Podlog et al., 2011; Podlog et al., 2015). One way to describe this stage is nervous excitement. Exercises designed to assist you in this stage of the recovery process will focus on increasing confidence, reducing negative thoughts, and education in managing and understanding your feelings and thought patterns.

Each section of this workbook will have an exercise specifically designed for each of the three stages. Guided by research, each exercise will be tailored to address the patterns of thinking and psychological challenges each stage presents. Exercises can be made applicable to every stage through personalization. Personalization will be important in the injury process; you will find different exercises and styles more effective than others. I encourage you to try all exercises to see what can be most effective for you.

**How to Use This Workbook**

This workbook is designed to teach useful mental skills that can assist you in injury rehabilitation. Each section will feature a mental skill and introduce various exercises to assist you along your recovery. Some skills that are going to be covered are mindfulness, confidence building, imagery, goal-setting, and motivational skills. Each skill being covered will require consistent practice to utilize the skills properly and effectively.
Mental Skills Journal

The rehabilitation process can be long and entail different skills to be utilized at different times. I highly encourage you to keep a journal of mental skills that you use throughout the journey. You can create a journal on a phone, computer, or in a notebook. Skills that are more effective to your recovery should be used often. A mental skills journal can be used to show the growth and process of the mental side of the injury process. This can aid in motivating you throughout the injury journey. An example of a journal format could be:

<table>
<thead>
<tr>
<th>Name of Mental Skill:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>How were you feeling before the exercise?</td>
</tr>
<tr>
<td>How did you feel after using the mental skill?</td>
</tr>
<tr>
<td>Did you find the mental skill effective for the situation? Note what context you used the skill.</td>
</tr>
<tr>
<td>What were some challenges to using this mental skill?</td>
</tr>
<tr>
<td>Do you plan on using this mental skill again?</td>
</tr>
<tr>
<td>Do you plan to make any changes to make the skill more effective for you?</td>
</tr>
<tr>
<td>How can you integrate this skill into your rehabilitation process?</td>
</tr>
</tbody>
</table>
It is possible you may be using mental skills for the first time. Just like when you started playing your sport it took time to perfect your craft, the same is true for mental skills, the more you practice them the better you will get. Don’t be discouraged if they are difficult to use in the beginning. Some skills may work better for you than others, stay patient and explore every skill.
Section 1: Mindfulness

“It’s always hard to deal with injuries mentally, but I like to think about it as a new beginning. I can’t change what happened, so the focus needs to go towards healing and coming back stronger than before.”

-Carli Lloyd, 2x Women’s World Cup Champion

What is Mindfulness and how can it help me during my recovery process?

Mindfulness is the non-judgmental awareness of the present, which includes acknowledging feelings, thoughts, and sensations (Mannion, 2021). Non-judgmental refers to the athlete placing no judgment or emotions towards physical and mental feelings; mindfulness can lead to a mastery of this skill (Mannion, 2021). Obstacles during rehabilitation can make return to play seem impossible and cause negativity about what is to come; however, it is important to focus on your current state of rehabilitation while not getting upset by the ebbs and flows of failure and success associated with injury rehabilitation.

Benefits of Mindfulness include:

- Guide the athlete to change their relationship with inner-thoughts, feelings, and emotions.
- Reduce reactivity to negative thoughts.
- Reduce stress and anxiety.
- Improved confidence

Research supports mindfulness as a beneficial exercise during injury rehabilitation. Injured athletes who participated in mindfulness training for eight weeks improved their mindful awareness of injury and increased their pain tolerance (Mohammed et al., 2018). Another study shows mindful awareness techniques to improve athletes’ outlook on injury, improve adherence
to rehabilitation, feel more in tune with their emotions, and reduce anxiety around injury (Bennett & Lindsay, 2016).

**Mindfulness Exercises**

In this section about mindfulness, four exercises will be covered that you can use to practice mindfulness during the recovery process. These exercises focus on being present, self-aware, and separating yourself from negative thoughts, feelings, and emotions.

**Stage 1: Realization of injury**

The following exercise is designed to be used in the realization of injury stage. This exercise will help you address the negative thoughts and attributions that occur at the beginning of the injury recovery process and how to refocus your mind when negative thoughts begin to creep in.

**Exercise 1: Thoughts are not Laws (adapted from Mannion, 2021)**

*When would this exercise be helpful?*

The purpose of this mindfulness exercise is to demonstrate that thoughts do not equal reality. Immediately after injury, you might think: Am I okay? What does this mean for my season? How long until I can play again? Is this my fault? Learning to deal with injury is difficult due to the emotions, time, energy, and passion athletes have for their sport. Thoughts and feelings that you have are separate from the self, this exercise will help you recognize thoughts that may be irrational (Mannion, 2021).

**Thoughts are not Laws – Exercise adapted from Mannion (2021)**

1. In this exercise you will say “I cannot jump” out loud, then you will begin doing a few pogo jumps.
2. Next, begin to repeat “I cannot jump” while performing pogo jumps for about 30 seconds. If you cannot jump due to your injury, some modifications can be made, instead you can tap your foot, snap your fingers, or nod your head. You can personalize the script. It is important to understand the concept of recognizing that thoughts are separate from the self with something simple like this jumping exercise or a variation of it.

3. Look to expand this understanding to more advanced skills like performing a tackle in football or jumping off a diving platform. For example, you might fear and think tackling or jumping off the diving platform will hurt you or that you are too weak. These are ways the mind limits your ability. Attack these thoughts with action. Trying actionable things will help you prove your thoughts are not true. Mindfulness can help you realize what little power thoughts hold on your performance and abilities.

**Collecting your thoughts after the exercise and applying them to recovery**

1. Acknowledge what thoughts you struggle with during your recovery journey. One way to do this is to think of emotionally charged thoughts that you have that are tied to your injury. Maybe whenever you feel a certain sensation in your foot it makes you upset, or doing a specific exercise in rehab reminds you of how you got injured. Some thoughts might even be positive.

2. It might be a good idea to write down these positive and negative thoughts.

3. Once you have a few thoughts written down try not to place an emotion on them, simply acknowledge that these re-occur during the recovery process.

**Modifications and tips for after the exercise:**

1. An advanced modification that you can make to this exercise is looking at previous film where you are performing a skill that seems daunting now. Acknowledge some of the
negative thoughts and fears you have about this. Your thoughts are separate from yourself, and you can perform as you previously have.

2. This same concept can be applied to negative thoughts that occur in the rehabilitation context (e.g., “I’m never going to recover”, “I’m not strong enough”, “I can’t do this”, “What if I get hurt again”). You can continue to benefit from this mindfulness activity by acknowledging the thoughts you have daily and processing them non-judgmentally. When you begin to acknowledge thoughts, fears, and worries, you can accept them for what they are instead of letting them control you. Try to continue this by recognizing thoughts, then letting them go, this will allow you to improve your ability to focus on the present and reduce fears and anxiety surrounding the recovery process.

**Stage 2: Rehabilitation**

During the reaction to rehabilitation stage, frustration and doubt are common due to the challenging exercises and a realization that a lot of work needs to be done before return to play can happen. These next exercises focus on dealing with increasing self-compassion and stress management which combat frustration.

**Exercise 2: Mindful Breathing**

**Purpose and benefits of mindful breathing**

The purpose of mindful breathing is to become aware of thoughts that come and go as well to help center yourself and focus on the present. During the recovery process there will be ups and downs. Set-backs and failures might happen; it is important to not let your emotions take control, but to acknowledge and understand how to manage feelings of frustration and be present.
Benefits of mindful breathing include:

- Increasing awareness to the present
- Boost bodily awareness.
- Stress management
- Increasing attentional focus
- Pain management

**How to prepare for mindful breathing:**

- Sit comfortably uncrossing any body parts.
- Wear clothes that you find comfortable.
- Close your eyes and turn off the lights if you feel comfortable.
- Breathe like you normally would.
- Don’t tense up any body parts, stay loose.
- Find a quiet area free of disruptions.

**Mindful Breathing Script (adapted from Mannion, 2021)**

1. Close your eyes and begin to focus on your breathing.
2. Place one hand on your chest and one hand on your stomach. Notice the rise and fall of your chest and stomach and the air traveling through your lungs and out your nose.
3. Continue to breathe and only focus on your breaths for a few minutes.
4. Let all your attention be on your breathing, the rise and fall of the body pushing air out and bringing fresh air back in.
5. If you hear any distracting noises or your attention drifts, kindly redirect your attention to your breaths.
6. Continue to breathe and feel present.
7. When you are ready open your eyes.

8. Did you notice any changes in your state from the beginning of the exercise to now? Take a moment and observe and acknowledge any differences.

After the exercise:

Take a moment and collect your thoughts, notice how you feel after the exercise. Is it different than how you felt before the exercise? Create a journal page every time you complete an exercise (example on page 9). This will help you remember what exercises you find most effective, what things to improve on next time, what exercises best help you and track your overall recovery progress.

When would I use mindful breathing?

Mindful breathing for beginners is best suited for controlled environments where you can take a step away from distractions. A good place to try this exercise is in a bedroom, outside in a quiet spot, or anywhere that is comfortable and relaxing for you. When you gain a good understanding on mindful breathing, you can use it even in a chaotic athletic training room when you begin to feel stressed. Mindful breathing can be beneficial in a variety of spaces.

Exercise 3: Mindful Body Scan

Purpose and Benefits of a Mindful Body Scan

The purpose of a mindful body scan is to bring awareness to bodily sensations. The injury rehabilitation process will cause soreness and pain sometimes. A body scan is helpful as the body will be going through changes in the recovery progress. It is important to be aware of bodily sensations and if needed report to athletic trainers or physical therapists for adjustments in the rehabilitation.
Benefits of a Mindful Body scan include:

- Improve bodily awareness.
- Increase self-compassion.
- Assist in coping with pain.
- Decrease stress.
- Improve focus.
- Help you relax.

**Before you start a mindful body scan, here are some important tips:**

- Close your eyes and turn off the lights if you are comfortable.
- Find a quiet area with lots of space for you to lie down or sit.
- It’s okay if your mind wanders, simply acknowledge it, and bring your focus back to the body and the present.
- Take a few moments to get in a comfortable position, either lying down or sitting, before you begin the script.

**Mindful Body Scan Script – (Mannion, 2021)**

1. Sit or lie comfortably with arms and legs in an uncrossed position.
2. Close your eyes if that’s comfortable with you.
3. Begin by gently checking in with your body, as it is right now. Notice any sensations.
4. Start the scan by noticing your feet. Be aware of them without judgment – just experience the moment. Simply notice the feelings and sensations such as temperature, muscle tension, touch, or pressure. Do not label them good or bad, do no try to change them – just be aware of them.
5. Let your attention slowly move to your lower legs. Simply pay attention to them; be non-judgmentally aware.

6. Little by little, move your attention up your whole body, noticing each part: upper legs, hips, stomach, lower back, chest, upper back, hands, lower arms, upper arms, shoulders, neck, face, and head.

7. Be aware of your whole body, noticing any changes in your state since the beginning of the scan.

8. When you’re ready, open your eyes.

*After the exercise:*

Following the exercise notice how you feel. This exercise can be personalized and address certain body parts that are important in your rehabilitation. For example, if you are rehabbing your shoulder, it would be important to focus on your shoulder and upper body muscles like biceps, triceps, and chest. This exercise can also be helpful during rehabilitation because it encourages athletes to connect with their body and recognize tenseness or pain, they were unable to bring their attention to previously. When you notice a certain body part is strained bring it to your athletic trainer or physical therapist’s attention.

**Stage 3: Return to sport**

This exercise focuses on reactions to returning to sport. Returning to sport can cause a mix of emotions both positive and negative. You might feel the need to be cautious in the beginning of your return and then gradually begin to feel comfortable and confident in practice. The body and mind have gone through significant changes upon starting the recovery journey. This exercise will emphasize bodily awareness. This can be an important skill when returning to
sport to not push the body too hard and to take moments to listen to the body to prevent any reinjury or unneeded strain.

**Exercise 4: Mindful Stretching**

**Purpose and Benefits to Mindful Stretching**

Mindful stretching will help bring bodily awareness to sensations in certain parts of the body. The body is constantly changing during rehabilitation; exercises will continue to push and improve injured areas, which will cause the body to adapt and may be sore or limit movement. Mindful stretching can be a useful tool in rehabilitation to feel more in tune with the body and recognize strengths, weaknesses, and improvements in your body.

Benefits of Mindful Stretching:

- Improve balance.
- Improve bodily awareness.
- Improve neuromuscular coordination.
- Improve flexibility.
- Improve postural awareness.

**Some tips to help you prepare for mindful stretching:**

- Close your eyes if you are comfortable.
- Find a quiet area with lots of space for you to lie down or sit.
- It’s okay if you have a wondering thought, simply acknowledge it, and bring focus back to the body and the present.
- Take a few moments to get in a comfortable position either lying down or sitting before you begin the script.
Mindful Stretching Script (Mannion, 2021)

1. Slowly bend at the waist and lean forward, let your arms hang towards the floor.

2. Feel the stretch in your lower back and legs.

3. Notice any sensations as you stretch. Be aware of them without judgment – just experience the moment.

4. Simply notice the feelings and sensations.

This is an example of a simple stretch and how to do it mindfully. Each athlete, based on sport, injury, and personal need will have different stretches that work best for them. Athletes should consult their medical team or athletic trainer for stretches that will specifically apply to them.

Extra Information on Mindfulness: Challenges, Tips, and Variations

Challenges to Mindfulness

- **Being present**: Mindfulness is all about focusing on the present moment. A person can have over 6,000 thoughts on average per day (Tseng & Poppenk, 2020). If the mind begins to drift from the present, do not get angry or frustrated. Instead redirect focus back to the present.

- **Takes time to become good**: Mindfulness exercises can be difficult at first, but the more they are practiced, the more effective the exercises will be.

Tips for Continued Practices

- **Patience**: One thing to remember when practicing mindfulness is to have patience. If you are dealing with anxiety, fear, negative thoughts, struggling with motivation, physical therapy adherence or any other feelings, the first step to begin to gain control over any
internal struggle is acknowledging it and becoming aware of strategies to help accept
thoughts and feelings.

- **Tracking progress**: Writing down these thoughts and feelings can be useful to track
  progress using mindfulness or can help reveal where thoughts challenge you. Utilizing
  these mindfulness strategies might not make every negative thought, feeling, or pain go
  away, but it is the beginning of improving and aiding in a healthy recovery.

**Variations and Personalization of Exercises**

Every exercise covered in this section can be personalized to fit each athlete’s needs. You
can create your own scripts and variations of exercises in your recovery log and save them for
later use. You can fit each exercise to your own needs with a little creativity:

- Use mindful breathing to help you calm down after a frustrating physical therapy session.
- Use the exercise “thoughts are not laws” to reduce reacting to your negative thoughts
  about your injury.
- Create a mindful stretching script that focuses on upper body stretches for a shoulder
  injury.
Section 2: Building Confidence

“Injuries made people lose confidence in me, but I never lost confidence in myself.”

-Penny Hardaway, former NBA player

Building unshakable confidence throughout the recovery process

Success in recovery means being able to return to the previous level of performance prior to injury. This entails progressively improving and strengthening your injured areas throughout recovery. Confidence building exercises can help you regain and build confidence during rehabilitation. Success on the field, court, or in the training room does not happen by chance. The hours you put in behind closed doors build the foundations needed to be successful. The same can be said for building confidence, it is not built overnight. Each stage of the injury rehabilitation process poses different challenges. Therefore, sometimes different exercises might be more effective at certain stages. Exercises can be modified to fit specific needs during each stage of the injury process.

Building the Foundations: Education and creating self-awareness

An important first step for building confidence is becoming self-aware of your current confidence and general education about confidence in the sporting context. Confidence is not a thing that you are born with or that some people have, and others don’t. Building confidence is a process that needs to continually be nurtured. Before jumping into the exercises, here is some brief information that will be important building blocks to develop an unshakable confidence.

Confidence in sports is “an individual’s belief they can do what it takes to be successful in their sport” (Williams & Hacker, 2021, p. 280). Thoughts and performance influence your confidence. Thoughts lead to feelings, which lead to behavior; for example, if you starts thinking...
about how hard it is to recovery from your injury, then you may begin to feel hopeless. This hopelessness could lead you medically retiring or quitting. Behaviors lead to feelings, which leads to thoughts; for example, continuous struggle with rehabilitation exercises may cause you to feel powerless (Hays et al., 2010; Thomas et al., 2007; Williams & Hacker, 2021). This might lead to thoughts about never being able to return to form before injury. Thus, it can be a vicious loop. Both scenarios could create a lack of motivation, resulting in avoidant behavior of physical therapy.

Using self-talk strategies is a way to help manage and improve confidence. **Self-talk** consists of the internal dialogue that you have with yourself either in your head or out loud. Everyone’s self-talk varies, what you consider to be productive thoughts or self-talk might be unproductive to another. Several studies support that self-talk strategies can improve perceived self-worth; therefore, enhancing performance and assisting in a speedier recovery (Arvinen-Barrow et al., 2015; Beneka et al., 2013; Clement et al., 2015; Williams & Hacker, 2021). In this section a few self-talk strategies are going to be covered such as thought stoppage, thought logs, an unproductive to productive thought logs, and learning how to construct affirmations that positively influence you. Self-talk will be used in conjunction with some imagery techniques that aim to boost confidence.

Confidence building exercises train the mind to withstand misguided thoughts and help an athlete trust in their abilities when coming back from injury (Williams & Hacker, 2021). There are many benefits to confidence building such as:

- Develop an understanding of self-confidence.
- Identify an athlete’s signature-strengths.
- Increase optimism.
Build resiliency.

Reduce the fear of failure.

**Barriers to confidence during rehabilitation**

Irrational thinking can limit your ability to reach your full potential. Unproductive thinking patterns such as perfectionism, catastrophizing, blaming, and one-trial generalizations are common among athletes and can have negative effects on confidence and performance (Dryden, 2009; Turner, 2016; Williams & Hacker, 2021). These complex mindsets can influence your self-talk. The ways in which you use self-talk can be either productive or unproductive to the athlete. Identifying unproductive thinking patterns during rehabilitation and modifying them can benefit you greatly. The following mindsets are common among injured athletes. Before going over self-talk strategies, read through the following mindsets and see if you identify with any.

**Perfectionism**

A perfectionist believes that everything they attempt should be successful and make no mistakes (Williams & Hacker, 2021). The perfectionist mindset can be maladaptive to the recovery setting because it causes athletes to be overly critical of themselves and adopt ineffective coping strategies (Cummings & Duda, 2012; Pentith et al., 2021). Their biggest fear is failure. This will prevent the athlete from trying or doing something they fear will produce mistakes and failures. If mistakes do occur, it will crush their confidence. In rehabilitation there are going to be many challenges in building back strength, increasing range of motions and many other things. A person with perfectionism might avoid doing exercises they struggle preforming well or avoid pushing themselves to try new more challenging exercises that could produce
failure. The more the athlete takes on the perfectionist mindset, the more crushing any mistake or failure becomes; in turn, hurting the confidence and mindset of the athlete.

**Catastrophizing**

Catastrophizing is expecting the worst-case scenario in any situation (Williams & Hacker, 2021). Athletes with this mindset will think “what if…”. In the rehabilitation context this might look like “What if I can’t get stronger?” “What if I don’t heal?” “What if I fall?” “What if I hurt myself?” Athletes that catastrophize live in fear of the worst and stress about things that have not happened yet or might never happen. Masten et al. (2014) pointed out that athletes who catastrophize may perceive situations as more stressful than their counterparts, making these catastrophizing athletes more vulnerable to stress and anxiety in rehabilitation. Athletes that catastrophize will only think about the event they fear happening, not the outcome of it.

**Blaming**

Blaming can be in the form of an athlete blaming oneself for everything or blaming other people for things. Taking all the blame for things that happen to oneself is not a healthy way to think as it can damage confidence (Williams & Hacker, 2021). In the rehabilitation context, some athletes are led to believe that their injury was their fault because they have been told they are clumsy or injury prone. Blaming others for everything and taking no responsibility is also a dysfunctional form of thinking. Some people take on this form of thinking because they believe they have no control over their situation (Williams & Hacker, 2021). Athletes need to learn that there are things both in their control and out of their control that sometimes cause injuries. The most important thing for an athlete with this mindset is to focus on the things they can control within their rehabilitation. Injuries happen for a variety of reasons, but only the athlete can
control their effort, attitude, and work ethic, which will help them reach a full recovery faster than having a “pass the blame” mindset.

**All-or-Nothing Thinking**

All-or-nothing thinking is seeing every situation in absolutes, it is either all good or all bad. This type of thinking can lead to judgmental thinking and does not address the complexity and hidden opportunity of some situations. Most athletes are driven to achieve a certain goal or attain that feeling of success in their sport, ultimately an injury is going to sideline and keep an athlete from achieving their goals for a period. In the rehabilitation context, a setback from injury might cause an athlete to think the entire season is ruined and nothing can be done to make it a successful campaign (McArdle, 2010). It can be hard to convince all-or-nothing thinking athletes to look at situations differently because they have an inflexible perspective.

**Building Confidence Exercises**

This section contains five exercises you can use to practice building confidence by addressing self-talk during the recovery process. These exercises utilize self-talk to change and manage negative thoughts, feelings, and emotions that occur throughout the recovery process; as well as self-talk that assists in performance. An affirmation exercise will provide you with the tools to use positive self-talk.

**Stage 1: Realization of injury**

The following confidence exercises are designed to be used in the initial reaction and realization of injury stage. These exercises address the relationship between your self-talk and emotional and behavioral response to injury.
Exercise 1: Thought Log—(adapted from Williams & Hacker, 2021)

What is a thought log and how can it benefit me?

It is important for you to build an awareness of your thoughts and how they influence behavior and emotions. A thought log can be a useful tool to collect self-talk and evaluate after the fact things that trigger unproductive or cue productive self-talk (Hardy et al., 2009). A thought log is a diary of thoughts that document how you feel about a specific moment and what thoughts occurred during an event. The goal of the thought log is to identify patterns in self-talk, emotions, and behaviors associated with specific events and see if there is problematic thinking or behaviors that deter the athlete from being successful (Williams & Hacker, 2021).

3-day Thought Log Challenge

The purpose of this exercise is to create a thought log by writing down negative thoughts throughout the day, specifically negative thoughts about injury. By writing down your thoughts you will be able to create a picture of what causes these negative thoughts, how they affect your mood and behavior, and how you deal with them.

1. For three days carry a notebook or use a phone to create a list of thoughts that come to mind. Try to be as exact as possible. These can be thoughts about anything but try to log thoughts immediately after they occur.

2. Write when the thoughts occurred.

3. Write what caused the thought, the location, and what occurred.

4. Write how it affected your feelings and emotions in the moment.

5. After each day sit down and reflect on how these thoughts affected feelings and emotions. See if any thoughts create strong physical or emotional responses. For
example, if you think “I can do this” when things started to become difficult, you might feel a release of stress due to your optimism.

6. From these reflections identify thoughts that are either productive or unproductive to recovery. If unproductive thoughts occur, Exercise 3: Unproductive to productive thoughts (page 30), is a great extension to the 3-day thought log challenge. This exercise will help reduce unproductive self-talk.

3-day Thought Log Example

<table>
<thead>
<tr>
<th>3-day Thought Log- October 15–17</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>October 15th</strong></td>
</tr>
<tr>
<td>• Thought: “How long until I can practice again”</td>
</tr>
<tr>
<td>• Where: Watching practice</td>
</tr>
<tr>
<td>• How did it make me feel: Watching practice just motivated me more to work hard so I can get healthy</td>
</tr>
<tr>
<td>• Thought: “This is so painful”</td>
</tr>
<tr>
<td>• Where: Trying to get into bed in my dorm room</td>
</tr>
<tr>
<td>• How did it make me feel: It made me feel tired and wonder when things will start to get better</td>
</tr>
<tr>
<td><strong>October 16th</strong></td>
</tr>
<tr>
<td>• Thought: “Coming in earlier than anyone else to do rehab and then sitting and watching practice is so unfair”</td>
</tr>
<tr>
<td>• Where: In class thinking about how tired I was from waking up early</td>
</tr>
<tr>
<td>• How did it make me feel: It made me feel mad because no one appreciated the work I was putting in to get healthy</td>
</tr>
<tr>
<td>• Thought: “I just want to go home and see my family”</td>
</tr>
<tr>
<td>• Where: Sitting in class while the team is traveling to an away game</td>
</tr>
<tr>
<td>• How did it make me feel: It made me sad because I want to be there with my teammates</td>
</tr>
</tbody>
</table>
Exercise 2: Thought Stoppage—(adapted from Williams & Hacker, 2021)

**Purpose and benefits of thought stoppage**

**Thought stoppage** is a technique to change unproductive self-talk in that all negative self-talk occurring needs to cease (Williams & Hacker, 2021). Early in the rehabilitation process, you might face negative thoughts and frustration in your current ability. Holding onto these negative thoughts, feelings, and emotions can fester and create growing psychological challenges, such as a lack of motivation or adherence to your rehabilitation program (Clement et al., 2015). Stopping the unproductive self-talk allows you to reset and refocus on the task at hand. This is important when dealing with failure and set-backs, which can occur during the injury rehabilitation process. Stopping the cycle before it spirals out of control will help you to become resilient and confident in your ability to succeed in the wake of challenges.

**How to stop your thoughts:**

1. Step one is to realize that unproductive self-talk is present. Think back to a performance in the past where things just were not going well. What kinds of things were you saying to yourself and how did that impact your performance?

2. Some examples of triggers to stop all thoughts that are occurring are saying “stop,” counting to three, clapping your hands together, fixing your hair, or taking a sip of water.
It is important to note that not all these trigger words or actions are applicable to all situations. Sometimes you will not be able to take three breaths or count to three depending on the situation. Find a few cues or triggers that will help you recognize when it is time to stop all internal dialogue.

3. Thought stoppage is a skill athletes can pick up relatively quickly. Practicing this skill is vital to the success of the exercise. The more you can train your brain to turn off unproductive dialogue, the better you will get at it.

**Stage 2: Rehabilitation**

It is important in the reaction to rehabilitation stage to have a positive attitude towards your rehabilitation. Rehabilitation challenges can cause frustration due to difficulty and isolation. Having productive thoughts will generate positive physical, psychological, and emotional responses. Productive thoughts and responses will build your confidence.

**Exercise 3: Unproductive to productive thoughts – (adapted from Williams & Hacker, 2021)**

In this exercise you are going to acknowledge unproductive thoughts where they occur and replace them with productive ones. This is called **countering**, the general process of trying to minimize negative or unproductive self-talk. You can police yourself or have a coach or athletic trainer assist you in recognizing these negative thoughts and then change your language of how you think about the situation. For example, in the initial reaction and realization of injury stage you will realize your injury has limited your abilities. Thoughts like “I might never play again” or “I can’t do this” can be reformatted into productive thinking (Williams & Hacker, 2021). Two strategies to countering include disputing and reframing. **Disputing** is changing one’s thoughts from seeing them as negatively affecting them to considering how they may be
productive by using facts and truths to disprove the unproductive thoughts (Williams & Hacker, 2021). An example of this is, “I learned to play at that level once, I can do it again with hard work and time.”

**Reframing** is changing how you perceive your situation. You can look at your situation as half-full or half-empty. Reframing acknowledges your experience but paints the situation in a different light and uses it to your advantage. An example of this could be changing the negative thought “I hate having to watch practice, I wish I was out there playing” to “Sitting and watching practice gives me a new perspective on the game and allows me to be a student of the game and focus on my tactics more.” Look at reframing your thoughts to find an opportunity to learn or discover something new every day. Often the injury recovery process seems monotonous, but there is always something to be learned from taking on a different perspective.

**Unproductive to Productive Thought Log -- (adapted from Williams & Hacker, 2021):**

In the table below are examples of what an unproductive to productive thought log can look like. In the left column are the negative thoughts that an athlete may have about their injury. From there you can look at thoughts and use countering techniques to change a negative thought into a positive one.

<table>
<thead>
<tr>
<th><strong>Unproductive Thoughts</strong></th>
<th><strong>Technique</strong></th>
<th><strong>Productive Thoughts</strong></th>
<th><strong>Rationale</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>I can’t do this</td>
<td>Disputing</td>
<td>I can be just as good or even better.</td>
<td>I learned to play at that level once, I can do it again with hard work and time.</td>
</tr>
<tr>
<td>I hate not being able to play</td>
<td>Reframing</td>
<td>Being injured gives me a chance to focus on getting stronger in the weight room.</td>
<td>Getting stronger will help me in recovery and when I return to play.</td>
</tr>
</tbody>
</table>
Steps to fill out an unproductive to productive thought log:

1. When you notice reoccurring unproductive thoughts write them down

2. Once you have a thought written down, think about how to change the thought to be productive by using either of the techniques discussed.

3. It may take some creativity to look at your situation differently, but the power of positive thinking can play a huge role in your recovery process, especially if you establish this kind of thinking from the beginning. A creative way to look at your situation could be to look at the little victories that come each day. This could be something as small as setting goals in range of motion and strength training or noticing less swelling and bruising by implying rehabilitation treatments. Goal-setting is an incredibly useful strategy to progress and cope with the sport injury rehabilitation process (see pg. 51 for Section 4: Goal-setting). Setting reasonable goals is one of the most significant indicators of successful coping with injury and rehabilitation (Johnson et al., 2016). Another strategy if you are struggling to see an unproductive thought differently is to ask a friend, teammates, athletic trainer, or coach to help you see your situation in a different light. Hearing and discussing other perspectives about your own situation can be helpful.

Exercise 4: Performance self-talk – (adapted from Williams & Hacker, 2021)

Purpose and benefits of self-talk for performance

Performance self-talk is utilized when giving instructional steps to yourself concerning important movements of a specific skill (Williams & Hackers, 2021). Self-talk that is positive, instructional, and motivational produce performance-based benefits, such as improved attentional focus and confidence (Tod et al., 2011; Williams & Hacker, 2021). In the rehabilitation context, your body is always learning to adapt and strengthening the areas that
were injured. Self-talk for skill acquisition and performance revolves around reminding oneself to perform certain key actions leading to execution of a movement or skill, in this case specifically in the rehabilitation context. **Cue words** are short, meaningful, action-oriented phrases that can help you remember how to successfully complete key actions. There are usually important actions that contribute to the success of performing a skill. Creating cue words for these specific actions can help you improve your performance. For example, an athlete doing a depth drop (stepping off a raised platform and landing on two feet) might need to focus on keeping their knees in line with their shoulders, keeping their chest up, and tightening their core for a stable landing. Cue words can help remind the athlete what actions and when they need to focus on them during a skill. The application of cue words to skills will be further explained in this next part.

**How to create effective self-talk for skill acquisition and performance**

1. Identify the skill you want to perform. For example:

   **Skill:** A depth drop

2. Identify key actions or movements within that skill. It can be difficult for athletes to relearn skills that have become so innate over the years. Actions like walking seem straightforward until you must reteach your body proper mechanics that you never thought about before. An athletic trainer, doctor, coach, or strength and conditioning coach are all useful resources to help you create cue words and identify key actions within a skill for success. These professionals have many years of experience and/or medical training to help make sure execution is biomechanically correct and ensures success. This is crucial when learning things in rehabilitation because developing bad habits and incorrect technique can leave you vulnerable to more injury or create deficits
in your performance. Try to limit yourself to 1-2 key actions to not overcomplicate things. For example:

**Key Actions**

- Keeping knees in line with shoulders
- Keeping chest up

3. Create cue words for the key actions or movements you identified. Tod et al (2011) describes three tips for creating cue words.

- Make them **instructional**—use words that remind you of the action.
- Make them **positive**—think about what you need to do vs. what not to do
- Make them **motivational**—use words that are going to stimulate a positive response. Here are some examples of words for identified key actions.

**Action → Cue Word**

Keeping knees in line with shoulders → “Out”

Keeping chest up → “Up”

4. Now it’s time to put it in action. When you attempt to perform the skill, you identified remember your key actions and cue words for them. Make sure to get the timing correct for when to use the cue words during the action. You may want to rehearse before preforming the skill.

**Tips for successful skill acquisition and performance self-talk:**

- Use cue words that will make you remember the physical action you want to perform.
- Keep self-talk minimal to avoid **analysis paralysis**—thinking about a simple action or movement so much you begin to not know how to perform the skill.
Use self-talk in the early stages of learning. As you progress, the goal is to get to the point of **muscle memory execution**—having actions so ingrained into your brain that they can be performed without consciously thinking about them.

Timing is everything – when learning skills in rehabilitation, work at your own pace.

**Stage 3: Return to sport**

You can experience a mix of positive and negative emotions when returning to sport (Clement et al., 2015). You might feel positive emotions such as excitement to rejoin your teammates or a sense of accomplishment after completing rehab. Other major takeaways can be the lessons you learned on the road to recovery, leading you to have a greater appreciation for your health, athletic ability, and a realization the adversity from the injury made you stronger and more resilient (Clement et al., 2015). Some negative emotions you might have about injury can come from uncertainty and fear of reinjury (Clement et al., 2015). These feelings and emotions can affect your behavior. For example, being fearful of re-injury could make you more cautious.

The following confidence building exercises will help deter nervousness and apprehension, so you can gain full confidence in your ability to return to full participation in sport.

**Exercise 5: Affirmations**

Affirmations - positive statements about yourself and about how you want to live your life either stated aloud or internally (Williams & Hacker, 2021).

*What makes something an affirmation?*

- Short
- Goal-oriented
- Believable statements
Examples:

- “I am fast.”
- “I am successful.”
- “I am healed.”
- “I am strong.”
- “I am a champion.”

Benefits of using affirmations:

- Increased feelings of autonomy
- Increase confidence.
- Reduce negative thoughts.

Sometimes, if you have not competed for a while due to injury, statements about what you need to do and how you need to perform are helpful. An affirmation if you do long jump could be “I am powerful” or “I am strong.” If these affirmations are said with belief and internalized, they can be a recipe for success. Affirmations should be written in present tense. Affirmations should be short and easy to remember as well as helping maintain optimism. It is also important to keep affirmations realistic. For instance, if you play defense in hockey, your affirmations should focus on statements related to your position or role. Focus on qualities and actions that you can control.

Creating Affirmations:

1. Brainstorm qualities and strengths that are important for your specific sport return. Once a list has been created, pick 2-3 qualities and strengths you find most important.

   Everything you write down should be a positive quality that will help you return to play.

   List 3 qualities that are important for success in your return to play.
2. Create a statement using those qualities and strengths, write them down on paper, a phone, or even write it on your wrist so you can reference them frequently before, after, or during a game or practice. Try to avoid incorporating words like “never” and “always” as these lean toward all-or-nothing mindsets.

Write an affirmation related to each quality.

3. Putting the affirmations in practice requires the commitment to the belief of your statements. In other words, you need to believe what you are saying for the affirmations to help boost confidence. It is also important that these mantras become habits and to use them consistently. The more you believe and identify with the affirmations the more these qualities will be exhibited and ingrained in your approach to rehabilitation and returning to competition.
Extra Information on Building Confidence: Challenges, Tips, and Variations

These confidence building exercises will be useful throughout the rehabilitation process. Although each exercise focused on a specific stage of recovery, any of the exercises may be helpful and applicable at any stage. Play with the different skills, see what feels comfortable, and identify the various times when you can use the skill to build your confidence as you heal. Some days it will be easier than others to be confident but remember that you have the power to control your mindset and your outlook on the situation.

Challenges to building confidence

- **Unproductive mindsets**: Understanding yourself and how you think, what motivates you, what makes you feel confident, and what gets you focused are important things to know. All these factors will be different for each athlete. Try to identify how you think and what you need to feel your most confident. This can be a difficult task and requires some reflection and education. The better you understand yourself to see what things motivate you and help change your mindset and allow you to be confident.

Tips for continued practice

- **Trust the process**: Remember that confidence is something that needs to be worked on daily. Therefore, consistency is key to building confidence throughout the injury process.

- **Highs and lows**: There will be some days that you feel more confident than others, but it is important to remember some of these techniques to help you push through the hard times and not be shaken by adversity. Continue to strengthen your body and your mind so that you can be back in the game in no time.
Variations and Personalization of Exercises

- It is important to remember that everyone responds differently to methods of confidence building and especially self-talk. What might get you out of a bad mindset might drive another deep down that path. Your confidence exercise might look a lot different compared to a teammate and that’s okay. If you did not find some examples or exercises to be helpful, you do not have to use them.

- Although some exercises were applied specifically to one stage, each exercise can be modified to assist in building confidence at any stage of the recovery process and beyond. Some modifications could be:
  - Use affirmations to boost positivity.
  - Use self-talk for attentional awareness when learning a new rehab exercise.
  - Use an unproductive thought log to track your thoughts outside of sport.
  - Use thought stoppage after you make a mistake in practice.
  - Create a thought log to see how stable your thoughts and feelings have been about returning to play.
Section 3: Imagery

“An injury is not just a process of recovery it’s a process of discovery.”

- Conor McGregor, UFC Featherweight and Lightweight Champion

What is imagery?

Imagery is using one’s senses to re-create or imagine possible experiences (Vealey & Forlenza, 2021). It is an intentional process and is poly-sensory, meaning it involves the use of sight, hearing, taste, touch, smell, and even kinesthetic sense, which is the body’s ability to feel itself moving in space. The beauty of imagery is that it allows athletes to practice sport specific skills/experiences without physically doing them. Severe injuries can leave athletes sidelined for months without the physical ability to perform skills needed in their sport. You can re-create previous or create future experiences. Creating future experiences can be useful because you can imagine yourself on the field or in the gym after injury. In situations where you might be watching practice, you can vicariously put yourself in your teammate’s shoes and the brain will be able to piece information together to create a familiar, cohesive imagery experience. You can use imagery to recreate yourself performing rehabilitation skills, manage pain, or imagine your body healing (Gledhill & Forsdyke, 2021). Implementing these strategies can lead to successful outcomes in recovery (Arvinen-Barrow et al., 2015; Zach et al., 2018).

Purpose and benefits of effective imagery practices in rehabilitation

Successful physical therapy requires not only the physical capability to perform tasks, but also the mental capacity to believe in one’s ability to perform tasks. You might lack confidence during rehabilitation. Depending on the duration and severity of injury, you may need increased exposure to scenarios to build confidence and understand expectations of returning to sport,
which can decrease re-injury anxiety. Benefits of imagery during the sport injury rehabilitation process include:

- Increase confidence
- Assist in speeding up the rehabilitation process.
- Manage pain
- Manage fear and anxiety of unfamiliar situations.
- Reduce re-injury anxiety.

**Vividness, Control, and Self-awareness Exercises**

A basic understanding of imagery is vital to successful imagery use, but it can take time to master it. It takes a lot of practice, just like learning a skill physically. A few things to go over before the imagery exercises are the foundations of imagery: vividness, control, and self-awareness (Vealey & Forlenza, 2021). To improve vividness, control, and self-awareness, you can practice specific imagery practices. Below are examples of how to engage vividness, controllability, and self-awareness.

**Vividness**

**Vividness** - refers to the clarity of your image, how accurate and representative it is to real life (Vealey & Forlenza, 2021).

**Ways to make imagery more vivid:**

- Use all your senses (e.g., taste, touch, smell, sight, hearing and kinesthetic).
- Hold objects you use in your sport or in rehabilitation (e.g., baseball, football, bat, a weight, a stretch band).
- Perform imagery in environments and positions that are like how you would perform them (e.g., squatting in the catcher position or using imagery while on a football field).
Below is an imagery script that you can use to remember the feeling of playing. Use all senses, try to make the image as realistic as possible. This imagery script will be for preparation of a practice.

**Vividness Exercise – (adapted from Vealey & Forlenza, 2021)**

Imagine yourself in the space you typically practice your sport. Look around, take in the environment. Notice the environment, the feel of the ground or floor beneath your feet. Are you indoors or outdoors? What do you smell and hear? Notice the weather or temperature, is it nighttime or daytime? Imagine types of drills you do. Notice how it feel to move and do this skill. Imagine a moment you made a good play, remember the feeling. Notice the physical sensation of doing those movements. How did you feel in that moment? How did your teammates and coaches react?

**Controllability**

**Control** – your ability to create the image you want and change things if needed (Vealey & Forlenza, 2021).

**Ways to make imagery more controllable:**

- Plan what is going to happen before you start the imagery.
- Imagine a skill in slow motion.
- Focus on the image and nothing else, be present.

A controllability exercise might feature the repeated imagery of a skill that is difficult to perform. In rehabilitation there are many times you fail an exercise or struggle. This is a good opportunity for you to control the image. The continued exposure of certain scenarios and experiences through imagery can result in an increase in perception of your ability and change your outlook on the rehabilitation process (Arvinen-Barrow et al., 2015; Von Rosen et al., 2018).
You can take notice of things that are wrong and image fixing the problem and completing the exercise successfully. You should focus on the kinesthetic feel throughout the movement, how did you feel differently when successfully completing the skill in imagery compared to when you failed physically performing the skill? Being able to control what you experience is vital. If negative imagery occurs, open your eyes and stop, then try again. If you or your coaches have video of you successfully performing the skill, then watching the video and immediately imaging that skill may help make the image more controllable. Being able to control images and acknowledge learning moments is essential to successful imagery. Below is an example of a controllability exercise about performing a box jump correctly.

**Controllability Exercise – (adapted from Vealey & Forlenza, 2021)**

Close your eyes. Imagine yourself in the training room. You are preparing to do box jumps. Set yourself up accordingly and imagine yourself performing the exercise correctly. This exercise has been difficult in the past, but it is important that you can see yourself performing this exercise correctly despite past failures. Continue to imagine difficult exercises or skills that you want to perform. Anytime you begin to think of yourself failing or performing a skill incorrectly, stop the imagery immediately and try again.

**Self-awareness**

**Self-awareness** – your ability to notice emotions, mental states and sensory details associated with performance (Vealey & Forlenza, 2021).

**Ways to be more self-aware during imagery:**

- Using imagery to become aware of skills that require specific attention to perform correctly.
o Consider your thoughts, feelings, emotions, and mental states (e.g., confidence, joy, being present, in the moment, focused, relaxed).

o Using imagery rehearsal to correct mistakes.

o Watching practice and implementing sensory details you see into imagery.

o Using both the internal and external perspectives to notice different sensory details.

**Self-awareness Exercise**

Close your eyes. Think of a skill that you want to perform. Use the internal perspective to start, imagine performing this skill successfully. Notice what are you thinking and feeling performing this skill? Are you confident and calm? Notice any emotions like joy, fear, or excitedness. Now notice touch, taste, smell of preforming the skill. Shift to the external perspective, imagine yourself a bystander watching someone perform the skill. Notice the environment, notice the details and actions of preforming the skill. What thoughts and emotions do you have watching yourself perform this skill?

**Perspectives of Imagery – Internal vs. External**

Using different perspectives of imagery can be useful, some perspectives are more beneficial in certain instances. Perspectives can be experimented with as there are benefits to both perspectives and emphasis on certain sensory details.

o Internal perspective is imagining as if you were physically performing the skill, seeing it through your own eyes. This perspective can be useful for situations where the athlete wants to see and feel themselves succeed at a skill or recreate the kinesthetic feeling, thoughts, and emotions of a situation.

o External perspective is watching yourself performing the skill, as if you were a bystander.
Imagery Exercises

In this section three exercises will be covered that you can use to improve and build competence with imagery during the recovery process. These exercises offer different ways to utilize imagery.

Stage 1: Realization of injury

Exercises in this stage will look to manage the initial shock, doubts, and realization that athletes have in the first days or weeks of their injury. Imagery techniques in this stage will require some education on your injury and insight into what is to come.

Exercise 1: Healing imagery

Healing imagery – A creation of the senses or images that focus on recovery and becoming healthy from an ailment or injury (e.g., imagining ligaments healing, imagining your muscles getting stronger, imagining walking, or performing a skill without pain).

Benefits of Healing Imagery

- Increase an athlete’s perception of control over their recovery.
- Relaxing the body.
- Reduce pain.
- Manage stress and anxiety associated with the injury.

Healing Imagery Script

Close your eyes. Imagine a cool ice pack on your injured area(s). Where the cool ice pack touches the skin, imagine your pain as balloons that are rising above your injured body and flying away taking swelling and pain with them. Remove the ice pack. The skin, cold to touch now begins to warm slowly. Imagine the blood rushing back into the injured area and rejuvenating the muscles and tendons, allowing the body to heal. The blood brings nutrients and
oxygen to the muscles to grow stronger and more resilient to stress. The body is becoming whole again.

**Stage 2: Rehabilitation**

Exercises in this stage will address the frustration and pain that may occur during rehabilitation. There can be a lot of discomfort and change associated with the rehabilitation, especially if surgery or other invasive measures were needed. Athletes need ways to effectively deal with their pain in rehabilitation (Arvinen-Barrow et al., 2014).

**Exercise 2: Pain management imagery**

A great addition to rehabilitation for you might be managing the pain with imagery. This can be done through a variety of techniques that distracts you with opposing calming images (Driediger et al., 2006; Miller, 2017; Miller & Munroe-Chandler, 2019).

**Managing pain imagery script**

Close your eyes. Take a depth breath in and breath out. Imagine the color red. This red symbolizes pain from your injury and physical therapy. Imagine your sore body part red, it is bright, fiery, and vibrant. Slowly the red begins to fade, its color growing softer, the intensity of the heat grows cold. Imagine the red is completely faded into a purple. Feel the coolness now, the purple now changing to a cool blue. The pain has faded, it is extinguished. Feel the coolness, feel the control you have over the pain. Take a deep breath and open your eyes when ready.

**Other images to manage pain:**

- Imagine performing an exercise with no pain – remember performing a skill before your injury, how did it feel?
- Put yourself in an immersive peaceful image – imagine yourself somewhere calming like a beach or a place you find comforting.
- Imagine the pain separate from yourself – floating away and letting it go.
- Imagine water soothing and extinguishing pain.
- Imagine pain emptying through each exhale and breathing in calmness and peace.

**Stage 3: Return to sport**

Exercises in this stage will help you imagine a clear path to returning to play. Return to play can bring both joy and some frustration. Amid this frustration it is important be able to deal with this stress. Imagery can assist in reducing stress, increasing attention, concentration, and mood.

**Exercise 3: Imagery for stress reduction**— (adapted from Vealey & Forlenza, 2021)

The injury recovery process can be very taxing on athletes physically and mentally. When you are close to getting cleared for competition, it is common to have anxiety and doubts about your physical capabilities and the possibility of another injury. The following imagery scripts are focused on relaxation.

**How to prepare for relaxation imagery**

1. Remember to practice the basic vividness and controllability exercises so that attempted imagery can be as realistic and effective as possible.
2. Pick 1-2 images or places you find relaxing. Everyone finds different things relaxing so find a happy place for yourself, such as the beach or a bustling city.
3. Find a comfortable and quite space.
4. Don’t be in a rush, allow yourself the time you need to feel relaxed.
5. Turn off your phone and get rid of any other distractions to help you relax.
Relaxation Imagery Scripts – (adapted from Vealey & Forlenza, 2021)

The following imagery scripts are to aid in relaxation. Although these scripts are short, they can take attention away from stressful situations you might encounter. These prompts can be useful when only a short amount of time is available; before you step on the field to practice, in between plays, during a water break. Try to create these images, immerse yourself in the experience, and relax. You can use these scripts or use them as inspiration to write one yourself.

1. “Imagine a candle being lit. Now imagine the wax slowly softening—becoming first gooey, then soft like butter, then totally liquid as the wax warms and melts” (Vealey & Forlenza, 2021, p. 263).

2. Imagine yourself on a beach. Feel the cool wet sand underneath you. Concentrate on the heat from the bright sun, warming up your body. Listen as the breeze rustles through the trees and creates a soothing melody with the crashing waves.

3. “Imagine a very thick rope that is tied into a big knot. See the knot in your mind. Notice the tightly intertwined pieces of the rope that are stretched taut against each other. Now imagine the knot slowly loosening—a little bit of slack at a time until it is all slack, limp, and completely uncoiled” (Vealey & Forlenza, 2021, p. 263).

Ways to modify relaxation imagery:

- If you are having trouble creating a vivid and controllable image, try to image something familiar that gives you comfort; your bedroom, a place you used to go often when you were younger, your favorite restaurant, a favorite vacation spot. It can be easier to imagine familiar things.

- Try using sounds to enhance your imagery—birds chirping, waterfalls, sounds of a crackling fire.
Use a picture to look at to help you imagine.

Imagine you’re the storyteller, include any details that you think will add to your relaxation or mood.

*Ideas of personal imagery scripts for relaxation*

- Imagine being in a tropical jungle.
- Imagine sitting at a campfire.
- Imagine taking your equipment off after a long hard practice.
- Imagine coming home to a home cooked dinner.
- Imagine being at an aquarium.
- Imagine your dream vacation.
- Imagine hanging out with your friends.
- Imagine the sounds of rain on the roof.

*Extra Information on Imagery: Challenges, Tips, and Variations*

During injury rehabilitation common challenges are frustration, decreased confidence, decreased motivation, pain, and increased stress. Imagery can improve recovery outcomes by combating many of the above challenges. Do not be discouraged if imagery is a hard skill for you to learn. Just like learning a skill in sport, practice is key to being successful. Continue to practice vividness, controllability, and self-awareness exercises to improve the overall effectiveness of your imagery practices.

*Challenges to imagery*

- **Requires time:** Imagery requires competence in vividness, controllability, and self-awareness for the most effective results, which also requires a lot of practice and energy.
to be devoted to this skill. Just like with any skill, the more you practice it the better you will get.

- **Can be frustrating**: Effective imagery requires an athlete to imagine specific images, due to the nature of the skill it might be frustrating when they are not capable of imaging what they want. If imagery is not going how you’d like, simply open your eyes and start again.

- **Quiet space**: When beginning imagery, it is best to find a place with limited distractions. This can be hard for athletes because they travel a lot, might live with other teammates in houses or dorms, or might not even have a quiet space in their life. If you struggle to find a quiet space, some unorthodox places to try imagery could be in a parked car, in the library, or outside.

**Tips for continued practice**

- Imagery in rehabilitation should be imagined as similar and realistic to the action as possible (Gledhill & Forsdyke, 2021).

- Be intentional when doing imagery. Have a goal in mind before imagining anything. Do you want to relax or visualize yourself being successful performing a skill or dealing with your post-surgery pain?

- If you don’t like what you are imagining, simply stop. Open your eyes and start again. It is important to imagine yourself being successful and doing things right in order to gain the correct benefits.

**Variations and Personalization of Exercises**

- Each person has a unique relationship with their senses and emotions related to certain images. To start, try to find “go to” images that can help you relax, assist in pain
management, or create healing imagery. You can do this by thinking back to the experience you have had with the emotions tied to each of those three types of imagery. For example, imagery that assists in pain management might evoke fear or discomfort. What are some ways you deal with discomfort? If you love the beach, then imagining yourself at your favorite beach can help distract and dissipate pain.

o Although some exercises were applied specifically to one stage, each exercise can be modified to fit any stage of the recovery process. Some modifications or variations of imagery could be:

1. Use relaxation imagery beyond the injury process – In school, life, and other instances that cause anxiety.
2. Use healing imagery for illness.
3. Use pain management imagery to finish physically and mentally challenging practices and workouts.
4. Create your own guided imagery script. It can be created relative to your injury. Work with your athletic trainer on ways to write out an imagery script about healing your injury. Use what you have learned about the recovery process, treatment, and exercises that are used to help heal you.
Section 4: Goal-Setting

“I’ve had injuries before. They are just obstacles to overcome.”

-David Haye, world heavyweight boxing champion

What is goal-setting and how can it help me in my recovery?

Goal-setting is planning specific steps to achieve an action. This can be an extremely useful tool during the injury recovery process because lack of motivation and a lack of rehabilitation adherence are two of the greatest challenges in the injury recovery journey. Goal-setting will increase motivation and rehabilitation adherence. Goal-setting can be effective for four main reasons:

1. Directs attention.
2. Mobilizes energy towards goals.
3. Increases persistence.

Benefits of goal-setting include:

- Influences action – what do I need to focus on to achieve this goal? Directs your attention to specific areas.
- Influences intensity – how hard are you pushing yourself to achieve this? What is the difficulty or timeline of the goal?
- Influences persistence of behavior – how badly do I want to achieve this? If it’s something important to you, behavior will be consistent.
- Increases motivation and commitment to the rehabilitation process.
- Higher-levels of confidence
- Lead to task-specific strategies that can improve performance.
• Reduces stress.

What is a goal?

Locke and Latham (2002) define a goal as “a specific standard of proficiency on a task usually within a specified time limit” and as an “objective or aim of action” (p. 705).

There are several types of goals:

• **Outcome goals**: Focus only on the result – were you successful or unsuccessful in reaching your goal (e.g., making a full recovery)?

• **Performance goals**: Focus on improvements to one’s past performances – did personal improvement take place over time (e.g., advancing in rehabilitation exercise by improving on previous benchmarks)?

• **Process goals**: Focus on strategies or techniques to lead to a result – what steps will help you reach a goal (e.g., brace your core, bend your knees, swing your arms)?

Goal-setting is one of the most popular mental skills used by athletes during the injury recovery process (Arvinen-Barrow et al., 2015). sport injury studies support that a mixed-goals approach is effective (Evans et al., 2000; Ievleva & Orlick, 1991). Setting both short-term goals and long-term outcome goals were related to a faster recovery (Ievleva & Orlick, 1991). Evans et al. (2000) showed process goals improved athlete focus on specific actions within a task, while performance goals helped provide specific targets the athletes wanted to achieve. Therefore, a mixed-goals approach promotes athlete motivation, an increase in confidence, and faster recovery outcomes.
Goal-setting Exercises

In this section we will cover three exercises that you can use to practice goal-setting during the recovery process. It is best to discuss your goals and appropriate timelines with an athletic trainer or doctor. Goal-setting requires an understanding of types of goals, so make sure to review the definitions and guidelines below to ensure your goal-setting is effective.

Stage 1: Realization of injury

This stage of injury comes with the initial shock and realization that injury has occurred. Athletes can become frustrated or sad that their season has changed in an instant. With this realization you may have to adjust goals you had set for the season and make new goals. You must consult with your AT or medical professionals to find appropriate goals to limit injuries. Inappropriate goals might lead to you to push too hard, making your injury worse or you may create new injuries because the goal may have overworked your body in other areas. The following exercises will teach you how to set appropriate goals for your situation or how to adjust goals.

How do we make good goals?

1. Set specific and measurable behavior goals.
   - Make the goal easily measurable to track progress – “I want to leg press 135 lbs.”

2. Set goals that will guide you to the next rehab steps.
   - Goal-setting for injured athletes must include collaboration with their AT of medical team due to the knowledge and safety needed. With their assistance set goals that will push you to the next milestone but are not out of reach. Athletic trainers will help you find the correct weight or range of motion goal considering your injury and ability.
3. **Set short-term goals.**
   - Short-term goals are steps towards a long-term goal. There are multiple markers that athletes have to meet before they are allowed to walk without crutches; some examples of short-term goals to getting off crutches could include: “I want to achieve 135 degrees of flexion,” “I want to reach 0 degrees of extension.”

4. **Set process and performance goals.**
   - Process goals will help you be able to complete your performance goals – “lean forward” “tighten your core.”

5. **Double check to make sure your goals align with the instructions above.**

**Exercise 1: Creating goals with an AT or medical professional.**

1. Write down a goal that will be able to be completed in a short-term.
   - ________________________________

2. How can you make this goal ***measurable***? Create a measurement for this goal so that you will be able to tell if you were able to achieve it. Is there a certain time you want to accomplish this goal? Write down how you are measuring your goal.
   - ________________________________

3. Make a goal that will guide you to the next rehab steps. Is this goal in line with what you want to achieve in rehab?
   - ________________________________
4. Make sure your goal is a **short-term goal** (a step towards your long-term goal).

5. What strategies will help you achieve your short-term goal? Are there any specific things you can do that will help you achieve this goal? Remember to create process and performance goals that are specific and measurable.

   - Process goal: __________________________________________

   - Performance goal: ______________________________________

6. Write your complete goal that follows all the tips to create **good goals**.

   - ______________________________________________________________________

**Stage 2: Rehabilitation**

Maintaining and building confidence and motivation during rehabilitation is vital. During the reaction to rehabilitation stage, your confidence in your abilities may begin to waver. Athletes can become unmotivated by lack of progress or setbacks. Goal-setting helps keep a vision of yourself achieving goals during injury and increases the likeliness to achieve a goal when you set appropriate goals. Achieving goals can lead to higher motivation and increased confidence because accomplishing goals demonstrates you are making progress.

**Exercise 2: Staircase goal planning— (adapted from Gould, 2021)**

Staircase goal planning can be a useful tool to set important steps that need to take place to achieve a goal. Laying out specific exercises, techniques, and expectations helps mobilize an
effort and attention to detail in preparation to achieve a goal. For this exercise you will create three performance goals that will act as steps to achieve a performance goal.

**How to create your staircase**

1. **Identifying your current ability**
   - Identifying where your ability level is provides you with a starting point.

2. **Identify what performance goal you want to achieve.**
   - With the help of your athletic trainers or doctors identify what goals can be achievable and appropriate for your situation.

3. **Identify three short-term goals.**
   - Remember short-term goals are steppingstones that lead to long-term goals (e.g., jump 5”, jump 10”, jump 20”). These goals need to be measurable, challenging, and focus on the short-term.

4. **Create 2-3 strategies or techniques that will help you progress through each short-term goal** (e.g., swing arms upward, tighten my core, build strength in my legs).
Example: Staircase goal for athlete with ACL injury

Create your own staircase.

*What is your present ability in the skill you want to achieve?*

- ______________________

*What is your performance goal?*

- ______________________
Identify three process goals (steppingstones) leading you to your performance goal.

1. __________________________________________________________________________

2. __________________________________________________________________________

3. __________________________________________________________________________

What are 2-3 strategies or techniques that can help you achieve your goal?

1. __________________________________________________________________________

2. __________________________________________________________________________

3. __________________________________________________________________________

Check your performance goal to make sure it is:

- Specific measurable behaviors
- Moderately difficult
- Focus on short-term success.
Stage 3: Return to sport

Returning to sport can be an exciting time, but also frustrating. Now that you are being incorporated into some sport specific actions, goals might become more focused on sport again rather than rehabilitation goals. You will have to recognize that time has passed since you last played your sport, you might be a little rusty or slow to keep up in the beginning. Other factors like teammates, coaches, formations, and positions might have changed while you were recovering.

Exercise 3: Adjusting goals.

Sometimes goals and desires from the beginning of the season need to be adjusted to fit your current abilities. Some reasons for adjusting goals can include how you recovered from the
injury, timeline of the injury, medical expertise, performance of other players or coach’s decisions. All these factors can change the reality of the situation you find yourself in.

How to adjust your goals

1. Recognize the goal(s) you had for yourself at the beginning of the season or prior to your injury.

2. Recognize the changes in your environment whether it be personnel, playing time, physical limitations, or coach decisions that influence your goals.

3. Are these goals still achievable within the timeframe and circumstances?

4. Make sensible adjustments keeping in mind the information above.

Write down one goal you had prior to your injury.

○ ____________________________________________________________

What changes have occurred in your sporting environment that could influence achieving your goal?

○ ____________________________________________________________

○ ____________________________________________________________

○ ____________________________________________________________

○ ____________________________________________________________

○ ____________________________________________________________

○ ____________________________________________________________
Based on current abilities set a new long-term goal. Remember to make sure that the goal is a specific measurable behavior, challenging, achievable, and focuses on performance or process.

- Specific measurable behavior:

- How is this goal challenging?

- In what time frame do you want to achieve this?

- Is this a performance or process goal?

Write down your adjusted goal.

What are three short-term goals that can help you get to your new goal?

- 

- 

- 
Extra Information on Goal-setting: Challenges, Tips, and Variations

Challenges to goal-setting

- **Recognizing individual differences:** It is important to understand that each athlete has strengths and weakness along with different physical and medical conditions. Comparing your recovery to another athlete is unrealistic. Each person will have a different experience and reaction that might cause an injury to be easier or more difficult than others. Continue to focus on process and performance goals. Focus on improving yourself each day by 1%.

- **Setting too many goals:** Setting too many expectations for yourself during recovery can overwhelm you. Coaches, parents, teammates, and athletic trainers can sometimes have expectations and goals that put pressure on you. Remember to stay focused on your own goals. Make goals personal to your own interests as this will help to motivate you when there is intrinsic meaning to a goal you set.

- **Setting one type of goal:** Don’t just set all performance goals. Having process goals can be useful to direct attention and mobilize an athlete’s energy to techniques and strategies that will ultimately lead to the goals that you set. The emphasis should be on process in recovery. Outcome goals are useful at times to evaluate performance or set benchmarks (e.g., make a full recovery, walk without crutches or a brace).

- **Modifying goals:** It can be difficult to accept that your previous goals need to be adjusted, but it is important to adjust when needed. Having new goals to reach for will increase motivation.
Not achieving goals: Sometimes setbacks are going to happen. Whether they are things in or out of your control, don’t beat yourself up over a goal that you didn’t achieve the first time. Instead, modifying the goal and try again.

Tips for successful practice

Social Support: Having a group of trusted individuals is vital during injury. Your athletics trainer, coaches, and friends can help keep you accountable to achieving the goals you set.

Working with your athletic trainer or medical personnel: Your athletic trainer is going to be one of the most important people in your circle during your injury journey. They possess the medical knowledge to help you make progress, which is also useful to know when making goals. Try to make time to meet with them monthly or weekly to adjust, create, and check progress towards the goals that you set.

Variations and Personalization of Exercises

Each of these goal-setting techniques can be applied to each stage if desired. Don’t be afraid to come up with your own goal-setting exercises as well. Some variations or personalization can include:

- Writing your goals down and placing them somewhere you can see them every day.
- Creating goals that address how you deal with injury regarding your attitude, effort, and mental well-being.
- Creating goals for the weight room
Section 5: Motivation

“It was worth every single day of being away and in that squat rack or on that shuttle board, every single conditioning day, it was worth every single moment.”

-Klay Thompson, NBA champion on returning from injury after 941 days away

Motivations and its Benefits in the Injury Process

Motivation is a state of mind. An individual’s desire, interest, and energy will translate into action (Mitchell, 1997). Thus, motivation is a psychological state that will influence behaviors, namely the effort and time that you put towards your recovery process. A lack of motivation is one of the most threatening things to an athlete’s recovery. Less motivated athletes might prolong their recovery process by putting in less effort and attention to their recovery.

Some benefits to high motivation include:

- Adherence to rehabilitation.
- Working towards a goal
- Improved athletes’ welfare.

How to Boost Motivation

Motivation is a particularly complex topic, there are so many different factors that affect motivation. Three factors that you should focus on to improve motivation are your competence of the environment, autonomy, and relationships. Competence refers to your perception of ability within the environment, how successful you think you can be (Ryan & Deci, 2002). Improving competence during injury includes getting comfortable in the athletic training room, knowing where all the equipment is and how to use it for recovery. Autonomy is the feeling that you are acting on your own will and have choices. Most of the time during injury you are
constantly told what to do and must stick to a strict regimen. Having your own say on some things in your recovery can make you feel like you have some involvement and control. Speaking to an athletic trainer about personal goals you want to set, exercises you feel you need to focus on more, or even if you need to ask to build in rest days can boost autonomy of your recovery. **Relationships** refer to connections to other people. This means that building relationships with your athletic trainer, teammates and coaches is vital. These relationships can support you when things get tough and create a sense of belonging. You also have a relationship with your sport, how it ties into your life and affects it. Competence, autonomy, and relationships are factors that will help you feel more motivated during recovery. Motivation studies notably acknowledge that motivation is a predictor of exercise adherence (Brewer et al., 2000; Santi & Pietrantoni, 2013). Therefore, staying motivated will help you stick to the rehabilitation plan and ultimately recovery as fast as you can.

**Motivation Exercises**

In this section we cover three exercises that you can use to improve your motivation during the recovery process. Exercises in this stage focus on staying motivated despite the initial shock and negative emotions injury may cause. Motivation exercises will point athletes towards value driven behavior, actions that you deem important based on your values.

**Stage 1: Realization of injury**

In this stage common struggles include the negative thoughts associated with injury. In the first few days after your injury your routine might drastically change by taking you out of practice, which limits social connectedness to the team. In addition, injury will limit your autonomy by having to adhere to a strict and often monotonous rehabilitation routine. Starting a
recovery process can also come with a lot of unknowns, reducing your competence of the situation. This can reduce athlete motivation.

**Exercise 1: What’s Your Why?**

Staying motivated and positive can be a struggle when you are taken out of your sport. When you dedicate so much time and energy to your sport, it is typically because you genuinely love what you do. Injury will cause you to have to do things you might not enjoy and even find painful. There might be times you have to do something because it will help the team, like handing out water during practice. In these times where you don’t want to do rehabilitation because it hurts, you are sore and tired from the extra weight room session, and you feel like giving up, remember why you started playing your sport.

**Finding your why**

Think back to when you began playing your sport. Why did you begin playing?

- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________

What about your sport made you want to compete in it? Was there a moment that made you fall in love with your sport or are there things you grew to love about your sport overtime?

Describe below.

- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
Think about your current situation. There is a lot you are going to have to endure, but there are a lot of good reasons why you should continue to work hard and stay positive. Do your teammates inspire you? Did you make a promise to your younger self? Do you love the feeling of playing on Friday nights? List reasons why you will continue to work hard and stay motivated.

- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________
- __________________________________________________________________________

Keep your why close to you. Whether you are inspired to work for your teammates or have your own personal reasons. Having your why can often help remind yourself of the reasons you continue in the face of adversity.

**Stage 2: Rehabilitation**

In this stage, confidence can begin to waver due to some exercises causing frustration or experiencing setbacks during the recovery process. Frustration can fester into doubts about your ability to recover. Despite the difficulties you need to keep your eyes on your goals. This exercise looks to establish autonomy in your recovery. What do you envision when you return to play? What things are you looking forward to? Think about all the things you are doing now that will pay off in the future.
Exercise 2: Vision Board

What is a vision board?

A vision board is a collection of photos, quotes, and words that represent your aspirations, what you are working towards. This board can include things like written goals, photos of trophies or inspiring moments, quotes, and dreams that you have. This vision board should be placed somewhere you will see it every day, such as on a bedroom door, in a locker, on a bathroom mirror, or in the car. Ultimately, this is going to be a collection of things that inspire and motivate you throughout recovery.

How to create a vision board

1. Find a platform or way that you are going to create a vision board. You could use a free version of Canva from the internet, PowerPoint, create a Pinterest board, use paper and markers, or create an Instagram page. Choose whatever method you feel will be most beneficial to you.

2. Brainstorm a list of goals and dreams that you have. It can be things related to your recovery process or something that motivates you after you are fully recovered. Some examples are getting stronger in the weight room, getting cleared to do more exercises, winning conference, being recognized for an individual award, getting an athletic scholarship, getting your first minutes upon return from injury, or getting to rejoin practice.

3. Find pictures or some type of image that represents your dreams and goals. For example, getting cleared for return to play or making a start after being out injured could be represented by a jersey hanging in a locker.
4. Brainstorm some sayings or quotes that are important to you. Is there something you say to yourself, write on your wrist before games, or a quote you constantly come back to?

5. Think of some moments in your sporting career that bring you great joy. Maybe it is getting to spend time and create memories with your teammates, winning a trophy, learning a new trick, bouncing back after a tough loss, or beating your cross-town rivals. If you have photos of these moments, it would be good to include them on the vision board.

6. Add anything else you feel is important and motivating. Find a good place to put your vision board. It should be somewhere you frequently look to remind you and motivate you of your goals and aspirations.

7. Examples of Vision Boards.
Goals for this year:
- Get full mobility on shoulder.
- Gain my strength back.

Goals for next year:
- Come back and be starting pitcher next year.
- Try to get a scholarship to play in college.

trust the timing of your life
Stage 3: Return to sport

Returning to sport can be a very exciting time but it also may cause some anxious and doubtful feelings. The goal for returning to sport is to feel confident in your ability to compete physically and mentally. It is important that you focus on your own improvements and limit comparisons to teammates. The following exercise will help you stay motivated by focusing on things within your control during return to play.

Exercise 3: Control the Controllables (Compton, 2016)

Comparing performance to other teammates will be detrimental to motivation and confidence as return to play is still a phase in the injury recovery process. This exercise will demonstrate how you can keep focus on your own performances and limit comparison by focusing on the things that are within your control.

1. Get a piece of paper and a writing tool.
2. On the paper draw a circle in the middle of the paper, big enough to write a couple words inside of it.
3. On the inside of the circle, you are going to write things that are within your control. For example, attitude or effort. On the outside of the circle write things that are out of your control, like the weather. Brainstorm more examples of things that are in and out of your control in your rehab, in the training room, on the field, and in general about your injury.
4. Look at each thing that you wrote as inside of your control. Focusing on the things you can control will change your outlook on difficult situations during recovery.

Extra Information on Motivation: Challenges, Tips, and Variations

It is important to remember that return to play is a step in the injury recovery process. To achieve the best possible recovery outcomes, continue to focus on the things that are within your
control and limit comparisons to others. Staying motivated will help you achieve your recovery goals and adhere to exercise aiding in your recovery.

**Challenges to Motivation:**

- Not everything is in your control. Sometimes setbacks or more challenges can come your way. This can make it difficult to stay motivated, but in these instances focus on the things within your control (e.g., attitude, effort, energy).
- Having social support can greatly aid in motivation during injury. However, it can be difficult if friends and family are not near. Try to seek support from teammates and other trusted people who are near you.

**Tips for continued practice**

**Tips to improve competence in your environment:**

- Work with your AT or medical staff to understand your injury timeline.
- Learn more about your injury and what caused it so you can strengthen any weaknesses.
- Study film
- Do your rehabilitation exercises to become more confident in your body.

**Tips to improve autonomy in your environment:**

- Talk with your AT and see if there are any exercises or things that you can do on top of your typical exercises (e.g., getting extra lifting session with the strength and conditioning coach, asking a coach for extra reps after practice, asking for private conditioning or agility training). Sharing your thoughts and opinions with your AT will make you feel more involved and in control of your rehabilitation.
- Setting goals with your AT will make you feel more in control and give you a drive to pursue these objectives you set.
**Tips to improve relationships in your environment:**

- Talk with teammates or coaches about things you see at practice.
- Try to stay involved at practice if you have to watch (e.g., grab water for teammates, bring gear to practice, pick up equipment or even guide other players and give advice)
- Bring a positive energy to your environments.

**Variations and Personalization of Exercises**

Each of these exercises can be applied to each stage and extended beyond the recovery process. Some variations or personalization can include:

- Using *Control the Controllables* after initial injury to limit blaming or a victim mentality
- Using a vision board after full recovery to plan for the next season.
- Using *What’s Your Why* after a bad performance or hard practice.
Final Thoughts

“Unfortunately, injuries are part of the game, and you have to adapt, keep faith, trust and never give up.”

-Raphaël Varane, 4-time Champions League winner and World Cup Champion

Turning adversity to growth

Regardless of if this is your first injury or you have had many before, athletes need to recognize that getting injured is part of the game. Even the most elite and all-time greats suffered injuries throughout their careers. Klay Thompson, Christen Press, Drew Brees, Tiger Woods, Maria Sharapova, Lance Armstrong, Serena Williams, and Sue Bird are just a few athletes who returned from injuries and were able to stay at the top of their game. What makes these players the best is that they never let anything deter them from being successful, especially not an injury. The changes and circumstances that occur due to sport-related injuries can propel athletes to grow in ways they never imagined. A connection between sport-related injury and personal growth is shown in athletes (Roy-Davis et al., 2017; Udry et al., 1997; Wadey et al., 2013).

Positive outcomes of injury include:

- **Personal growth** (i.e., learning strategies of injury prevention, gaining greater knowledge of themselves, gaining greater maturity).

- **Psychological-based performance enhancements** (i.e., feeling more confident in their sporting capabilities, developing a greater passion for your sport, being able to cope with stress more effectively).
Physical and technical growth (i.e., being physically stronger than you were before your injury, having an increase in flexibility and endurance, turning previous weaknesses to strengths).

Using mental skills during recovery may aid in a speedier recovery (Arvinen-Barrow et al., 2015). Your injury recovery journey will be unique to you, so be sure to try different exercises and be curious. Mental skills can help you learn a lot about yourself, and these skills can be used beyond injury. Use this time to invest in yourself and discover what helps you best perform.

Questions for reflection upon full-recovery:

*What is one way you have grown physically, mentally, and emotionally during your recovery from injury?*

*How have become a better individual from your injury?*

*How have your attitudes or beliefs about certain things changed because of your injury?*

*How have you become more resilient?*

*Do you feel a greater passion for your sport?*

*How do you feel stronger?*

*How do you feel about your injured area now?*

Final words of encouragement

Injury can be a difficult time for athletes. So much of your time, energy, and life is invested in your sport. Continue to believe in your ability to overcome adversity and personal challenges. These instances will make you more resilient and unstoppable in the face of future adversity. Lean on those around you for support and use your medical staff as a resource and team to help you achieve the best possible outcome. Do not lose faith in your ability or value.
References


http://bgsusportpsych.blogspot.com/2016/10/controlling-controllables.html


Appendix A: A Review of Athlete Reactions to Injury and Incorporating Mental Skills in Rehabilitation

Injuries can take a toll on athletes as negative emotional states and downcast moods are associated with injured athletes (Kroshus, 2016). Wiese-Bjornstal et al. (1998) developed the integrated model of response to sport injury, which provides the framework to understand the complicated and numerous factors that contribute to post-injury psychology. Documented in several athlete rehabilitation studies, it is common for athletes to question their ability to compete at the same level again, experience anxiety of re-injury, feel frustration, have low self-esteem, and doubt their return to sport all together (Clement et al., 2015; Johnston & Carroll, 1998; Kunnen et al., 2020; Von Rosen et al., 2018). Mental skill interventions for injured athletes have shown promise in their ability to help athletes feel like they are recovering faster and more prepared to return to play; however, psychological interventions are underutilized in the injury rehabilitation context (Arvinen-Barrow et al., 2015). Although there are biomarkers and physical standards for returning to play, psychological return to play readiness affects the athlete’s confidence, perceptions of sporting capabilities, and motivation to regain previous competitive standards (Podlog et al., 2015). The following is a review of the integrated model of response to sport injury and the impact of mental skills on athlete rehabilitation to return to play.

Psychological Reaction to Injury

An injury causes disruption to an athlete’s normal routine, there can be adverse reactions that challenge their response to sport injury (Johnston & Carroll, 1998). An injury, especially a longer lasting one, can cause stress, leading to psychological and emotional challenges. Several emotional and psychological reactions to injury have been documented in research involving athletes. Von Rosen et al. (2018) conducted interviews with elite adolescent athletes about their
perceptions and experiences of injury. They operationally defined injury as harm affecting participation in sport for 4 or more weeks (Von Rosen et al., 2018). Through the interviews Von Rosen et al. (2018) conducted the athletes described that their injuries have effects that go beyond the field, including frustration, anger, self-blame, difficulty concentrating, loneliness, and a sense of loss of identity. Similarly, Clement et al. (2015) interviewed athletes about their psychological responses during their rehabilitation. They divided the psychosocial response to injury into three phases: reaction to injury, reaction to rehabilitation, and reaction to return to sport. During the reaction to injury phase, athletes experienced generally negative responses, which are dependent on cognitive appraisals to severity of the injury (Clement et al., 2015). Negative thoughts about injury were associated with negative emotional states (Clement et al., 2015). During the reaction to rehabilitation phase, athletes experienced frustration, had doubts about adhering to rehabilitation, were cautious when progressing with rehabilitation, and seeking and receiving social support (Clement et al., 2015). During the third phase, reaction to return to sport, athletes experienced a mix of positive and negative reactions, such as excitement to return to play, but also feeling nervous and anxious about reinjury (Clement et al., 2015). As a young adult in college dealing with psychological and emotional upheaval, it may be difficult to navigate and adapt to the changes an injury can cause. Knowing that in addition to physical ailments during injury, psychological ones exist as well, and it is important to help athletes understand why and how they suffer emotionally and psychologically from an injury.

**Pre-Injury Psychology**

The stress and injury model, developed by Andersen and Williams (1988) and later modified by Williams and Andersen (1998) notes that there are three psychosocial antecedents (personality, history of stressors, and coping resources) that can contribute to the likelihood of
A Psychological Skills Workbook for Injured Athletes

injury. A person can have certain characteristics associated with each factor that can influence an individual’s reactivity to stressful sport situations (Williams & Andersen, 1998). Some characteristics associated with the three antecedent factors can be unfavorable to coping with stress. For example, characteristics of personality like trait anxiety, mood, and optimism play a role in personality and should be considered (Horn & Smith, 2019). A characteristic like trait anxiety can play a role when an athlete responds to a stressful situation. If an athlete has higher trait anxiety, they might become more anxious when dealing with injury leading to different types of behavioral and emotional responses compared to an athlete with low trait anxiety.

Weise-Bjornstal et al. (2012) found that negative moods and fatigue can influence susceptibility to injury because these things can intensify the reaction to stress; therefore, athletes who struggle managing negative affectivity related to stress can be more susceptible to injury. Stressors are defined as events that are perceived as dangerous and can cause unfavorable cognitive, behavioral, and emotional responses (Williams & Andersen, 1998). History of stressors can include moving to college and living on your own for the first time, death of a loved one, exams, doing poorly in class, or ending a relationship. A consistent finding in the research is that negative life events cause stress and can increase the likelihood of sport injuries (Mann et al., 2016; Steffan et al., 2009).

A final psychosocial antecedent is coping resources (Williams & Andersen, 1998). This may include interventions such as mindfulness training, stress management, or safety training in their sport (Williams & Andersen, 1998). A meta-analysis of antecedent factors of injury by Appaneal and Habif (2013) further supports the stress and injury model. They found that in over 80% of the studies they reviewed, there were significant increases in likelihood of injury to athletes based on dysfunctional personality antecedents, high history of stressor antecedents, and
low coping resources; these are characteristics that exacerbate the stress reaction. Personality antecedents, history of stressor antecedents, and coping resources need to be held in close consideration when addressing athletes with injuries and can be used to promote prevention and explore better personal coping options and skills to those with increased likelihood of injury due to psychosocial vulnerabilities leading to psychological and emotional challenges.

**Integrated Model of Response to Sport Injury**

In this section, I review the innerworkings of the Integrated Model of Response to Sport Injury (Wiese-Bjornstal et al., 1998) as it relates to athletes. Personal factors and situational factors impact an athlete’s cognitive appraisal of injury, which in turn influences an athlete’s emotional, behavioral, and cognitive response to injury and recovery outcomes (Wiese-Bjornstal et al., 1998). The model can be found in Appendix B. Numerous sport injury rehabilitation studies document athletes having lower self-confidence, questioning their ability to return to sport, frustration, and re-injury anxiety during the rehabilitation process (Von Rosen et al., 2018; Clement et al., 2015; Kunnen et al., 2020; Johnston & Carroll, 1998). Wiese-Bjornstal and colleagues’ (1998) Integrated Model of Response to Sport Injury and Rehabilitation describes that mental skills help athletes cope with the diverse responses to sport injury.

**Personal Factors**

Factors mentioned in the model include personal factors of injury and individual differences. Personal factors of injury could include characteristics like history, severity, type, perceived cause, and many other things. An injury characteristic like history impacts the athlete’s cognitive appraisal. Dealing with the same injury or multiple successive injuries, can lead to different appraisals such as having a resilient spirit: the athlete has the belief that if they recovered once they can make a full return to sport again despite the hardship. On the other hand,
an athlete may feel overwhelmed by the stress of another injury, negative thoughts can lead to negative emotions and there can be varying degrees of negativity (Clement et al., 2015). An athlete might try to come back too fast from injury because they begin to grow frustrated with the same tedious rehabilitation. Another personal factor characteristic of injury is severity of injury. This characteristic of injury has been heavily tracked; Clement et al. (2015) conducted interviews with division-II athletes about their reaction to injury and diagnosis. Clement et al. (2015) discovered cognitive appraisals were linked by how severe and how long the injury would keep the athlete out of sport. Therefore, a sprained ankle will produce a different appraisal than a broken ankle. A sprained ankle may set an athlete out for a few weeks causing some goal adjustments, whereas a severe injury causing an end to a season will have more adverse psychological effects such as a sense of loss, anger, and even grief (Clement et al., 2015).

Clement et al. (2015) reported that negative thoughts about the injury led to negative emotions in the athletes; athletes with more severe injuries may struggle with more intense and persistent negative appraisals. Kunnen et al. (2020) found that if athletes had a great desire or passion to get back on the field it’s because they love and value their sport. Things like doubt, fear, and anxiety did not hold the athlete back from return to sport. Autonomous motivation decreased negative affectivity to injury and return to play (Kunnen et al., 2020). Perceived cause of an injury is another example of a personal factor. Injuries occur for a multitude of reasons, but athletes make attributions that help them cope with or rationalize what has happened. Some athletes blame themselves, another player or team and grow resentment for whatever they chose to blame. Other possibilities lie with blaming a coach for putting them in a bad situation or feeling overworked by them. Von Rosen et al. (2018) wanted to gain a better insight into the perspective of elite injured adolescent athletes including their experiences and consequences of
injury. A major finding in their interviews include self-blame as a theme that related to coping and rationalization of the injury (Von Rosen et al., 2018). A particular athlete shared her experience of her coaches telling her that she was clumsy, therefore she began to rationalize and believe that the reason she would continually get injured is because she was a clumsy person (Von Rosen et al., 2018).

There are individual differences that affect cognitive appraisals. The three main individual differences covered in the integrated model of psychological response to sport injury (Wiese-Bjornstal et al., 1998) are psychological, demographic, and physical differences. Athletic identity is a psychological characteristic that can influence response to sport injury and rehabilitation. Athlete identity is defined as the degree to which an individual identifies with the athlete role (Helms & Morris, 2020). Von Rosen et al. (2018) conducted interviews with elite adolescent athletes about their perceptions and experiences with injury. They found injury is a threat to athletic identity in young elite athletes. Heird and Steinfeldt (2013) discovered that strength of athletic identity is reliant on success athletes have had and experiences that help reinforce their athlete identity. Moreover, Heird and Steinfeldt (2013) described that identity theory relates to the importance of a given role and how that role begins to define their core identity. Athletes use that identity as a lens through all situations the more they feel connected through it. This means that a highly successful elite athlete will identify greater with their athletic identity compared to a lower-level athlete because recognition of athletic success is tied to the elite athlete’s core identity. Like Von Rosen et al. (2018), Heird and Steinfeldt (2013) found that overidentification with athlete identity can turn dysfunctional for athletes making them more likely to have adverse responses to sport injury and rehabilitation. When the recognition and
identification for their athletic ability is taken away, an identity crisis of sorts can occur to injured athletes.

Demographic information refers to gender, age, socioeconomic status, education, race, and many other characteristics that define each person. Some of these demographic characteristics play a role in psychological responses to injury and rehabilitation. Prevalence of injury varies between males and females. Von Rosen et al. (2018) monitored 340 elite adolescent athletes bi-weekly for 52 weeks regarding sport injuries and found a significantly higher prevalence of female athletes were injured and a significantly higher proportion of female athletes reported a longer time of being injured compared to their male counterparts in their longitudinal study. Nimphius (2019) critically dissected research and beliefs that female athletes are destined for injury due to biomechanical differences between genders. The pelvis, which shows anatomical differences, females have a wider and typically shorter pelvis, has often been the cause of discussion and reason for greater lower extremity prevalence of injury in females. Nimphius (2019) believes that oversimplified gender comparisons of biomechanical and physical differences perpetuate assumptions that female athletes are less capable of performance and have greater chance of injury. Society’s attitude towards female athletes influences female athletes’ cognition of their susceptibility, possibility of recovery, strength, and athletic ability (Nimphius, 2019). The social stereotypes that female athletes are weaker and that is why they have a greater prevalence of injury proves to be a barrier (Hively & El-Alayli, 2013). Other reasons can be attributed to the greater prevalence of injury in females. For example, due to the masculine domain of sports and especially the weight room, females fear looking bulky or uncomfortable in this highly male dominated space (Dworkin, 2003; Soomro et al., 2016; Waldron, 2019). Building strength and agility through sport performance is key in injury prevention. A similar
comparison of this situation to another demographic is the assumption that black men could not be successful quarterbacks in the NFL because it is a position that requires great leadership and high intelligence (Van Ottlerloo, 2013). Therefore, for a very long time and still today, most quarterbacks in the NFL are white (Van Otterloo, 2013). As Nimphius (2019) explained some demographics in sport have very little to do with why a player gets injured and more to do with the belief and power that society gives to stereotypes of each demographic. The identification with certain demographics brings along weight of how a player should act, play, and be treated in certain situations and this should be considered as a personal factor affecting reaction to sport injury.

Physically there are characteristics that everyone can have that effects their recovery outcomes and, in turn, can leave athletes feeling frustrated. If the body is not fueled properly during the recovery process, this can lead to setbacks to return to play. With lower activity levels associated with injured athletes, changes in eating can occur. Disordered eating is defined as “dysfunctional eating patterns, including fasting, dieting, vomiting, over-eating, binge-eating, taking laxatives and diet pills” (Wilson & O’Connor, 2017, p. 7). Disordered eating is a common issue among athletes (Mancine et al., 2020). Mancine et al. (2020) specifically found that athletes were at an increased risk of disordered eating when their focus was on being lean. During rehabilitation much of the focus can be on the appearance and feeling of the body (e.g., gaining weight due to inactivity, trying to gain muscle back, trying to gain full fitness again). Disordered eating can affect psychological responses of self-perceptions, cause frustration, and distract from positive recovery outcomes.
Situational Factors

Situational factors include sport, social, and environmental characteristics in the integrated model of response to sport injury (Wiese-Bjornstal et al., 1998). Sport factors include scholarship status and playing time; an injury could derail an athlete’s hope of earning a scholarship or even threaten their current scholarship status. The perceived threat of losing scholarships can cause athletes to have a variety of reactions over-adhere to rehabilitation, increase their intensity and effort throughout rehabilitation, or even cause extreme stress on the athlete (Hilliard et al., 2017). Bejar (2013) investigated athlete coping with injuries and the pressure that came with trying to hold on to an athletic scholarship when their family does not have the means to pay for college or expects the athlete to retain the scholarship as a sign of status. Not much research has been done on low socioeconomic (SES) families and the pressure of holding a scholarship, Dyck (2006) found that Canadian parents with a high SES increased their children’s chances of receiving an athletic scholarship due to available resources. Dyck (2006) also revealed that holding a scholarship is seen as a sign of prestige that reflects upon the parents and family of that individual. Bejar (2013) described that holding a scholarship played a role within the rehabilitation process. Athletes with greater scholarships were seen as more valuable and received better attention; also, athletes who were part of revenue generating sports were put at greater priority within the medical staff compared to non-revenue generating sport athletes (Bejar, 2013). Scholarships for lower SES athletes proved to be vital for their participation in their sport as it was the only way college could be paid for, an injury could threaten everything for these athletes (Dyck, 2006). Scholarship status depended on availability to resources, leading to stressful cognitive appraisal of the situation. Likewise, injury can take athletes out in certain games and competitions that could be a vital opportunity to demonstrate
their abilities. Evans et al. (2012) investigated stressors experienced by injured athletes through semi-structured interviews. Athletes expressed their lament of missed opportunities because of injury. One athlete described their frustration and disappointment with missing the rugby World Cup and big competitions leading up to the tournament (Evans et al., 2012).

The severity and duration of injury is out of the athlete’s control, which can evoke multiple different cognitive, behavioral, and emotional responses (Wiese-Bjornstal et al., 1998). In a social context, the sport medicine team can influence responses of an athlete. Bejar et al. (2019) explored how athletes’ perceptions were influenced by athletic trainers’ (ATs) ability to fulfill basic psychological needs of athletes as well as cater to the athletes’ fluctuating motivation throughout rehabilitation. The sample included 10 NCAA Division 1 athletes from the northwest and southeastern regions. Four domains of the athletes’ perceptions of their recovery were revealed: athletes’ concerns about injury and rehabilitation, ATs’ feedback and athletes’ perceptions of competence, a person-centered approach from ATs and the athletes’ perceptions of autonomy, and a connection between ATs and athletes’ perceptions of relatedness (Bejar et al., 2019).

Domain I focused on concerns about injury and rehabilitation. The most common worries from athletes revolved around psychosocial concerns (Bejar et al., 2019). This includes athletes’ worry about psychological responses they were experiencing from the injury such as depression, decreased confidence, and disconnection from teammates (Bejar et al., 2019). Similarly, research by Clement et al. (2015) investigated psychosocial responses during sport-injury rehabilitation and found a large majority of cognitive appraisals and worries are rooted in re-injury anxiety, self-confidence concerns, nervousness, frustration, stints of depression, decreased self-esteem, and some excitement towards return to play. In the research of Bejar et al. (2019), a common
intrapersonal worry about rehabilitation was that athletes were going to disappoint their
teammates and coaches because of their injury (Bejar et al., 2019). These concerns are the
combination of personal factors and situational factors that influence athletes’ emotional and
behavioral responses in relation to the long-term recovery outcome as shown in the integrated
model of response to sport injury and rehabilitation (Wiese-Bjornstal et al., 1998).

Domain II focused on ATs’ feedback and athletes’ perceptions of competence which
relied largely on the feedback ATs gave to athletes (Bejar et al., 2019). Three main areas of
feedback fostered feelings of competence: information about injury and recovery, clear
expectations and goals, and encouragement and reassurance (Bejar et al., 2019). When athletes
were given clear information about their injury and recovery, their beliefs in making a successful
recovery were increased. In addition, when ATs explained the injury and recovery process in
detail and held their athletes accountable for knowing what is going on with their injury, athletes
reported high competence (Bejar et al., 2019). Setting clear expectations and goals with the
athlete is associated with a quicker recover than expected by the surgeon, when trainers
encouraged athletes to adhere to their rehabilitation exercises (Bejar et al., 2019). ATs that
provided emotional support to their athletes fostered more favorable outcomes and helped
increase motivation of their athletes (Bejar et al., 2019).

Bejar et al. (2019) found that encouragement and reassurance ATs give to their athletes
during rehabilitation is crucial in fostering a good motivational climate for the athlete. Athletes
in the study explained how encouragement and reassurance from their ATs during difficult tasks
helped them feel more confident and deal with frustration and negative appraisals (Bejar et al.,
2019). Clement et al. (2015) also found that some athletes sought support from Ats as well as
coaches and close family, friends, and teammates. In interviews athletes described that the ATs
that comforted them, and the support received from coaches and ATs helped the athletes push through hard times during rehabilitation (Clement et al., 2015). Domain II from Bejar et al. (2019) and Clement et al. (2015) outlines the clear importance of social characteristics within the situational factors of the integrated model of response to sport injury and rehabilitation (Wiese-Bjornstal et al., 1998). Many coaches candidly expressed their lack of knowledge and that they felt unqualified to provide proper support during the injury rehabilitation process (Maurice, 2019). Their lack of medical expertise is crucial to consider in the rehabilitation process as many coaches pressure athletes to recover as fast as possible, creating a serious situational influence that can negatively affect the cognitive, emotional, and behavioral response of an athlete.

Domain III explains how a person-centered approach from ATs effects athletes’ perceptions of autonomy (Bejar et al., 2019). All athletes in the study recognized that having input is a crucial factor in creating autonomy in their rehabilitation program (Bejar et al., 2019). Athletes who felt like their opinions were taken into consideration during rehabilitation expressed feelings of validation and control (autonomy). Likewise, Bejar et al. (2019) found when an exercise caused pain, the ability of ATs to adjust the program and be holistically focused on the athlete’s physical, mental, and psychosocial needs aided in the athlete’s feelings of autonomy (Bejar et al., 2019). Domain III ties in with the overarching theme of Domain II, which is that social characteristics within the social factors of the integrated model of response to sport injury influence athletes’ recovery (Wiese-Bjornstal et al., 1998). The findings from Bejar et al. (2019) emphasize the importance of an injured athlete’s social support system.

Domain IV focused on the feelings of perceived relatedness between ATs and athletes (Bejar et al., 2019). The personal connection between ATs and athletes influences perceptions of relatedness. Building rapport with athletes is crucial for positive rehabilitation. Athletes in the
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study noted that positive interactions and relationships with their AT made them feel more motivated and positive about their rehabilitation process (Bejar et al., 2019). On the other hand, athletes who had negative and discouraging interactions with their AT struggled more to feel positive and motivated to complete rehabilitation (Bejar et al., 2019). One athlete in the study mentioned how some comments from an AT left them in tears, making them feel disconnected and uncomfortable during rehabilitation (Bejar et al. 2019). An emphasis on care for the “whole person” also allowed athletes to see the importance of having an AT invested in their well-being beyond sport (Bejar et al., 2019). One athlete in the study mentioned how having an outlet to talk about family and relationship issues in their life made them feel valued and made them want to work hard for their AT because they feel cared for even on their worst days; feelings of relatedness were positively associated with feelings of motivation (Bejar et al., 2019). Likewise, the findings from Clement et al. (2015) acknowledged the need for more holistic care in the rehabilitation process. Personal and situational factors like sport medicine and coaching influences impact responses to injury and rehabilitation.

Environmental influences also play a role in athletes’ psychological response to sport injury and the rehabilitation process. Athletes who do not have accessibility to rehabilitation or the proper environment and resources to rehabilitate injury are put at a disadvantage compared to other athletes with all the necessary infrastructure. This situational factor influences cognitive, behavioral, and emotional responses of the athlete (Bejar, 2013; Wiese-Bjornstal et al., 1998). Bejar (2013) described the experience of Division I cross-country and track and field athletes during rehabilitation. Because cross-country and track and field do not receive the same support from the university as sports like football and basketball, these athletes were not given the same benefits to cover medical fees or resources for rehabilitation. The expectation of seeking their
own medical treatment and covering expensive medical costs caused frustration and anxiety for the athletes (Bejar, 2013). These athletes also believed that because they were not afforded the same luxuries as other athletes, they were unable to recover as fast from their injury (Bejar, 2013).

Arvinen-Barrow and Clement (2015) investigated perceptions of ATs about a multidisciplinary approach to rehabilitation. Although the athlete’s main point of contact throughout rehabilitation is the AT, a multidisciplinary approach to rehabilitation includes several professionals working together during the rehabilitation process to aid in the athlete’s recovery. Arvinen-Barrow and Clement (2015) surveyed 393 athletic trainers to identify who they believed would be essential to a multidisciplinary team. The most selected professionals or individuals chosen were athletic trainer (99.4%), injured athlete (97.2%), physician (94.6%), athletic coach (84.7%) and strength and conditioning coaches (78.8%) (Arvinen-Barrow & Clement, 2015). The three lowest professional or individuals chosen for believed importance in a multidisciplinary rehabilitation process are bio-mechanist (14.7%), clinical psychologist (14.1%), and psychiatrist (13.8%) (Arvinen-Barrow & Clement, 2015). With research showing athletes experience cognitive and emotional responses to injury, it is troubling to see the lack of importance placed on clinical psychologists and psychiatrists in the recovery context (Weise-Bjornstal et al. 1998; Von Rosen et al., 2018; Hilliard et al., 2017; Clement et al., 2015; Johnston & Carroll, 1998). The rehabilitation environment would greatly benefit from the presence of trained mental health professionals leading to even healthier outcomes for athletes.

Through the numerous studies discussed it has been evident that personal and situational factors influence athletes’ cognitive appraisals, behavior, and emotional response. In addition, it has been documented that injured athletes have unanswered mental health concerns and there are
little resources that all athletes have available to them (Garrick, 2017). Although negative emotional states and downcast moods can be associated with injured athletes, there are only about 38.3% of NCAA institutions that have a full-time mental health professional working with their athletes (Kroshus, 2016). The gold standard would be to have a clinical psychologist available for these athletes; however, this is not a feasible option for most universities or sport programs to offer as a service to their athletes. An inclusive alternative to this is educating athletes through mental skills training. Education in mental skills gives athletes coping techniques personalized to their needs and the ability to recognize when and where the skills should be used.

Mental Skills Training and Rehabilitation

Sport injury and rehabilitation can produce situations that can prove to be challenging, but there are techniques that can reduce challenges that these stressors present. Emerging research in sport injury rehabilitation incorporating mental skills point to positive outcomes in the recovery process. Arvinen-Barrow et al. (2015) reported that of athletes who used mental skills during rehabilitation, 71.6% of them felt that the implementation of mental skills aided in a faster recovery. Mental skills are an important part of the integrated model of response to sport injury (Wiese-Bjornstal et al., 1998). Arvinen-Barrow et al. (2015) described that mental skills mediate injury occurrence, are a personal factor that influences cognitive appraisals, and effects behavioral and emotional responses to injury situations. A barrier to implementing and teaching mental skills to injured athletes is that athletic trainers have a limited scope of knowledge on sport psychology training (Zakrajsek et al., 2017). The use of a mental skill workbook during rehabilitation could aid the athletes and take the stress off athletic trainers in providing care they are not appropriately trained in. There are several skills that can be taught to athletes to help
reduce psychological difficulties caused by injury; these include mindfulness, confidence
building, imagery, positive self-talk, and goal setting (Arvinen-Barrow et al., 2015; Ivarsson,
2021).

*Mindfulness*

Obstacles during rehabilitation can make return to play seem impossible and cause
negativity about what is to come; however, it is important athletes focus on their current state of
rehabilitation while not getting upset by the ebbs and flows of failure and success associated with
injury rehabilitation. Mindfulness is the present-awareness and intentional non-judgmental
acceptance of thoughts, feelings, bodily sensations, environment, and situations (Mannion,
2021). Mindfulness practices get their roots from the Buddhist philosophy, which challenges the
typical approach most Western coaches and athletes take to pushing negative thoughts and
feelings away. Suppression of thoughts can bring the athlete’s attention away from the task at
hand and make negative thoughts hyper-accessible when under strain (Wegner & Erber, 1992).
For example, when a coach tells their athletes to not mess up a skill in competition, it makes that
thought hyper-accessible to the athlete and distracts them. During rehabilitation the correct way
to perform exercises is stressed by the medical staff. The pressure to perform physical therapy
exercises correctly, deal with the fear of failing and re-injury, and the fear of not reaching the
same level of performance before injury is a threat to getting the best rehabilitation outcome
(Clement et al., 2015; Von Rosen et al., 2018). This fear and apprehension can fester into
negative thoughts and feelings towards certain exercises. Practicing mindfulness will guide the
athlete to change their relationship with inner thoughts/feelings and bodily sensations, like a
racing heart, or sweaty hands when pushing to perform a new exercises and progress in recovery.
When non-judgmental awareness is present, the mind can become stronger; no longer will the
mind accept negative thoughts or feelings as truth. Instead, the athlete’s attention will be brought that these thoughts exist and recognize thoughts not consistent with present-reality. This will reduce reactivity of an athlete when they begin to think negative thoughts about making mistakes and failing exercises at physical therapy, or self-handicapping their potential to recover, mindfulness will bring their attention back to the present (Mannion, 2021).

The implementation of mindfulness in sport injury rehabilitation is relatively new; however, there are several considerations and benefits of mindfulness, like reducing stress that can apply to sport injury rehabilitation. Mohammed et al. (2018) investigated the effect of mindfulness on stress reduction and pain tolerance. Participants featured 20 athletes who sustained a sport injury keeping them out of participation for more than three months (Mohammed et al., 2018). In addition to the physical rehabilitation, half of the participants practiced mindfulness meditation for 8 weeks (Mohammed et al., 2018). Results showed participants in the intervention group increased their mindful awareness of injury and increased their pain tolerance (Mohammed et al., 2018). In addition, participants in the intervention group notably, but not significantly, showed a decrease of stress and anxiety scores (Mohammed et al., 2018).

Bennett and Lindsay (2016) recognized the scarcity of applied mindfulness techniques in sport injury instances. They applied mindfulness interventions with an elite women’s hockey team with the goal being to overcome anxiety surrounding recovering from an injury. Bennett and Lindsay (2016) adopted Acceptance Commitment Theory (ACT) as their foundation to the intervention with an emphasis on improving psychological flexibility and mindful awareness. ACT is an approach to mindfulness that is recommended for use with psychological, behavioral, and performance difficulties (Bennett & Lindsay, 2016). In this case study the authors worked
with the U21 Great Britain women’s hockey team. An athlete dealing with a previous lower back injury reported still feeling pain and constant fear of re-injury her back, despite an MRI showing the athlete had healed. For the next 6 months the athlete went through 12 sessions, typically lasting an hour, to confront and understand the feelings and attributions the athlete was applying to the situation (Bennett & Lindsay, 2016). Within these session Bennett and Lindsay applied ACT techniques and improved the athlete’s adherence to hockey training and helpful stretches to help with her back, reduced anxiety and improved her confidence (2016). Bennett and Lindsay (2016) credited these improvements to helping the athlete become aware of their emotions and attributions towards the injury. Once the athlete’s attention was brought to their emotions and how that dictated a lot of their actions, they could begin to change their thoughts and consequentially their actions. For example, previously this athlete tended to leave practice or sit out due to the fear of getting hurt again. The emotion fear began to dictate the athlete’s actions, but through the ACT sessions the athlete recognized values important to them like commitment to her team, discipline, enjoyment of the game, and friendship. Bennett and Lindsay (2016) noticed the value driven behavior as a key indicator of reducing the anxiety the athlete felt. When this shift in perspective occurred, the athlete was missing practice less and practicing stretches because these actions were value driven, these actions reflected her commitment to her team and discipline. ACT has shown to be a useful technique in mindfulness training that feels authentic and effective for the athlete. Bennett and Lindsay (2016) describe their growing confidence in the implementation of ACT and mindfulness with athletes facing anxiety from injuries.
Building Confidence

Athletes losing confidence in their ability to recover or fear that they will not reach the same level of performance after injury has been documented in research (Clement et al., 2015; Podlog et al., 2015). Confidence is a key ingredient to being successful and studies have shown the direct correlation of the two (Williams & Hacker, 2021). Success in recovery means being able to return to the previous level of performance prior to injury and throughout the recovery progressively improve and strengthened the injured areas. Success on the field, court, or arena does not happen by chance, performance is a reflection of all the hours athletes have been put in behind closed doors. The same can be said for building confidence, it is not built overnight. Confidence building exercises are a useful way to train the mind to withstand misguided thoughts and help an athlete not waiver in their abilities when coming back from injury (Williams & Hacker, 2021). Both negative thoughts and poor performance can be reflected in a bidirectional relationship; thoughts lead to feelings, which lead to behavior or behavior leads to feelings, which leads to thoughts (Hays et al., 2010; Thomas et al., 2007; Williams & Hacker, 2021). For example, an athlete who just underwent surgery for an injury might begin to question if they can get through the recovery let alone play again. These thoughts could lead to lack of motivation, resulting in avoidant behavior of physical therapy and following self-fulfilling prophesies. Likewise, poor performance of rehabilitation exercises could lead to feeling anxious and questioning their physical capabilities. Some of the most iconic athletes in the world share the quality of confidence, they also do not lose confidence when they have a poor performance or need to workback from injury to full strength. This resilience or mental toughness is necessary to continue building and maintaining an athlete’s confidence. Resiliency encompasses the ability to adapt to situations and is vital to turn adversity to success; this is why athletes that are going
through injury can greatly benefit from confidence building exercises (Fletcher & Sarkar, 2014; Sarkar et al., 2015).

There are several strategies that have empirical evidence of building confidence and maintaining it (Beaumont et al., 2015). In a study by Beaumont et al. (2015), six themes emerged that were associated with developing sport-confidence in athletes. These six themes are developing an understanding and awareness of self-confidence, logging evidence, manipulating the coaching environment, tailoring things for the individuals, using psychological skills, and developing an athlete’s signature-strengths (Beaumont et al., 2015). The four themes associated with maintaining confidence are a continuation of the development process, influencing the athlete’s environment, stable beliefs, and reinforcing abilities (Beaumont et al., 2015). Similarly, Williams and Hacker (2021) emphasized self-awareness and educating athletes as a first step in building confidence. Self-awareness is important because an athlete must understand themselves to be as successful as possible. Within the context of building confidence an athlete needs the knowledge of how their performances or thoughts and feelings affect their thinking patterns to redirect those feelings to productive thoughts and behaviors. Knowing how things affect each athletes’ mental well-being and performance is the first step to building a foundation of unshakable confidence. Both Williams and Hacker (2021) and Beaumont et al. (2015) believed in the use of mental skills to aid in building confidence such as pressure training, self-talk, remembering previous performance accomplishments, and optimism. The themes of the study from Beaumont and colleagues (2015) can be applied to mental skills training to help athletes learn to build confidence and maintain it throughout the rehabilitation process.
**Imagery**

Imagery is a powerful tool in sports, belief grows in athletes that can see themselves return to the field from injury. Injuries can create difficult circumstances for athletes and attribute to mostly negative changes in how the athlete thinks and feels about themselves and their behavioral responses to injury (Kroshus, 2016; Wiese-Bjornstal et al., 1998; Forsdyke et al., 2016). Imagery has been shown to be an effective tool in several sport injury rehabilitation studies (Arvinen-Barrow et al., 2015; Zach et al., 2018) and one of the most used mental skills for injury because it does not require the actual performing of skills; however, imagery remains an underutilized tool in the sport injury realm.

Imagery is described by Vealey and Forlenza (2021) as using one’s senses to create or re-create experiences. Imagery is poly-sensory, it involves the use of sight, hearing, taste, touch, smell, even kinesthetic sense, which is the body’s ability to feel itself moving in space. Imagery is an intentional process as opposed to daydreaming. Athletes can re-create or create experiences like creating a personal highlight film in their head to build their confidence or even re-create experiences where they made a mistake and go back and fix them with the proper action (Vealey & Forlenza, 2021). Creating future experiences can be useful for injured athletes because they can imagine themselves back on the field after injury. It is especially useful because injured athletes are forced to watch practice, they can vicariously put themselves in positions their teammates are in, the brain will be able to piece information together to create a familiar cohesive imagery experience. The functional equivalence theory states that the most successful ways to go about imagery focuses on the person using images that will activate their brain in the same way their brain will be activated when physically performing the skill (Vealey & Forlenza, 2021). This theory suggests that similar networks in the brain are functioning and active in
imagery as they would be while performing them physically. This means that athletes can get a similar stimulation in the brain when imagining a skill being performed, although much less than physically performing the skill. Using imagery during the sport injury rehabilitation process has shown improvements in recovery outcomes in athletes by increasing their confidence and perceptions of their current sporting capabilities (Callow et al., 2001), improving self-efficacy (Cupal & Brewer, 2001; Zach et al., 2018), speeding up the rehabilitation process (Maddison et al., 2012; Zach et al., 2018; Ingram et al., 2016), managing pain and unfamiliar situations (Zach et al., 2018; Rodriguez et al., 2019), and reducing re-injury anxiety (Cupal & Brewer, 2001; Rodriguez et al., 2019).

A study from Zach et al. (2018) examined the effects of imagery on self-efficacy in injured athletes. Although results were not significant for imagery effecting self-efficacy belief, it was found that generally individuals felt more confident when visualizing positive-affective states in their mind. Additionally, a noted limitation was how self-efficacy was measured in the study (e.g., task and coping), Zach et al. (2018) admitted a measurement and assessment more consistent with Bandura’s self-efficacy measurements might have been better due to the complexity of understanding self-efficacy. Rehabilitation studies have also documented a fear of the unknown when experiencing an injury for the first time (Bejar et al., 2019). Some of this fear comes from the unfamiliar feelings of intense pain that accompanies the rehabilitation process (Driediger et al., 2006). In an early study looking at imagery in the rehabilitation context Sordoni et al. (2000) looked at the use of imagery in the motivational and cognitive context during rehabilitation, it was seen that athletes often used motivational imagery to manage pain experienced during their recovery process. To gain a better understanding in the beliefs and use of how imagery affects athletes’ recovery 10 injured athletes were interviewed (Driediger et al.,
In these interviews it was revealed that the injured athletes believed the use of imagery helped them in cognitive, motivational, and healing purposes. Driediger et al. (2006) suggested that the implementation of imagery paired with the physical rehabilitation aspect can facilitate recovery rates of injured athletes. In one of the early studies of imagery on re-injury anxiety Cupal and Brewer (2001) did a study on participants who underwent ACL surgery. The intervention group received 10 imagery sessions over a six-month period. Findings revealed that the intervention group reported significantly less re-injury anxiety compared to the control group (Cupal & Brewer, 2001).

The beauty of imagery is that it allows athletes to practice sport specific skills and experiences without physically doing them. These rehabilitation studies have outlined the need for more confidence training through imagery for injured athletes (Von Rosen et al., 2018; Clement et al., 2015; Kunnen et al., 2020; Johnston & Carroll, 1998; Podlog et al., 2011). The functional equivalence theory in imagery and applying the ideas from the literature above has made it clear there is an advantage that can be gained when using imagery in the rehabilitation context for boosting confidence and other positive outcomes as a byproduct of confidence.

**Positive Self-Talk**

Positive self-talk can be a useful tool for athletes during the recovery process. Self-talk is defined as a statement to oneself either out loud or in one’s head (Hornbrook, 2012). Arvinen-Barrow et al. (2015) discovered that of those athletes that use mental skills training, positive self-talk is one of the most used during the sport injury recovery process. There is constant internal dialogue, and it is important to be aware of the contents of these thoughts. Williams and Hacker (2021) acknowledge that thoughts directly affect feelings and behavior. If an athlete begins to think they can’t do something, it will reflect in their behavior and emotional appraisal of
situations. Self-talk is a game-changer when it can be used to boost performance and confidence. Several studies support the benefits of positive self-talk during the recovery process. Abdoli et al. (2018) conducted a study with professional basketball athletes and found that the implementation of instructional self-talk phrases helped the athletes to improve their performance. Clement et al. (2013) and Arvinen-Barrow et al. (2015) found that positivity and reducing “I can’t” and “I won’t” statements were related to a speedier recovery for athletes compared to those that did not implement this technique. This association is similar to Williams and Hacker’s (2021) assumption that thoughts lead to feelings, which lead to behaviors. Therefore, an athlete thinking they are incapable of recovering from an injury will eventually be consumed by those feelings and those thoughts will be reflected in behaviors that reduce chances of a good and speedy recovery. Using techniques of positive self-talk, although it can be a hard to master, can decrease negative affectivity associated with the injury rehabilitation process (Clement et al., 2013; Arvinen-Barrow et al., 2015).

**Goal-setting**

One of the most common psychological skills used by athletes is goal setting (Hamilton, 2019; Arvinen-Barrow et al., 2015). Goal setting provides a productive framework for the athlete to improve both physical and mental aspects of the athlete during rehabilitation (Berengüí et al., 2021). Athlete goal setting in tandem with an athletic trainer during the rehabilitation process can increase motivation and commitment to the rehabilitation process (Santi & Pietrantoni, 2013). Sometimes athletes struggle with the slow process of recovery and do not see small improvements. It is important that the athlete can see progress throughout rehabilitation and stay motivated. Some injury rehabilitation studies found that being able to achieve small goals and have a sense of accomplishment reduced stress within the athletes (Arvinen-Barrow et al., 2015;
Zakrajsek et al., 2017). Other studies also have found that goal setting can improve general mood (Johnson, 2000) and be associated with high levels of self-efficacy (Brinkman et al., 2019). Self-efficacy is an individual’s belief they have the capacity to carry out a task, this factor can affect sport-related injury outcomes (Thomee et al., 2007). Evans and Hardy (2002) investigated goal setting and self-efficacy with individuals who sustained a sport related injury. They reported that the 5-week goal-setting intervention exhibited effects on athletes’ adherence, treatment efficacy, and mental well-being (Evans & Hardy, 2002). There were three groups: goal-setting intervention, social support group, and the control. Results confirmed Evans and Hardy’s (2002) hypotheses about the goal-setting intervention group with injured athletes: self-reported adherence was significantly greater for the intervention group, the goal-setting group had the highest level of self-efficacy, and there was an increase of the psychological variables of reorganization and a decrease of dispirited (Evans & Hardy, 2002). The sense of autonomy from the goal-setting intervention greatly fostered increased motivation, which in turn led to more adherence. Similarly, Coppack et al. (2012) found that setting goals increased self-efficacy and fostered greater adherence to rehabilitation, but their methods of goal setting focused on giving the participant autonomy of their recovery. Giving the athlete autonomy over their recovery process and goals should be a consideration to improve adherence and self-efficacy throughout the recovery.

Conclusion

The emerging literature and the incorporation of mental skills in injured athletes is promising and many of the current findings should be taken note of. Mental skills offer the opportunity for athletes to problem solve and learn effective coping skills. Although the gold standard is to have athletes working with sport psychologist individually or with teams, not all
sport organizations or schools have the means to do so. The research surrounding injury and the integrated model of response to sport injury (Wiese-Bjornstal et al., 1998) shows the mental, emotional, and behavioral effects an injury can have on an athlete and highlights the special care athletes in these positions need (Von Rosen et al., 2018; Kroshus, 2016; Clement et al., 2015; Kunnen et al., 2020; Johnston & Carroll, 1998). It also shows the need for individuality in the rehabilitation space, each athlete has unique characteristics that lead to different appraisals (Wiese-Bjornstal et al., 1998). The injury recovery process needs to become holistically focused. Not only that but most athletic trainers do not have the sport psychology background to comfortably give advice and guidance in such practices (Maurice, 2019).

The implementation of a mental skills workbook for injured athletes would prove to be invaluable and forever change the sport injury recovery process by aiding in a smoother and quicker return to play. Educating and encouraging athletes to use mental skills workbooks backed by research, can grow, and create individually tailored recovery journals that document their progress both physically and mentally. As the integrated model of response to sport injury (Wiese-Bjornstal et al., 1998) shows, there are numerous characteristics that are unique to each individual. These characteristics can elicit different emotional, cognitive, and behavioral responses, which affect their recovery outcome. The incorporation of a workbook would prove useful in its ability to create individual plans to overcome each athlete’s specific areas of need during recovery such as re-injury anxiety, lack of adherence to rehabilitation exercises, lack of motivation and self-confidence and many more. The research covered in this paper has shown the potential that mental skills have in improving these areas in injured athletes.
References


Appaneal, R. N., & Habif, S. (2013). Psychological antecedents to sport injury. In M. Arvinen-Barrow & N. Walker (Eds.), *The psychology of sport injury and rehabilitation* (pp. 6-22). Routledge.


Appendix B

Integrated Model of Response to Sport Injury (Wiese-Bjornstal et al., 1998)