

Performance Pressure and How to Cope With It

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<p>This Bachelor's thesis is a product based work about performance pressure of athletes and different ways to cope with it. The final product is a manual for dealing with pressure with practical coping mechanisms aimed towards ice hockey goaltenders. The manual is made for Team Shutout Goalie School.</p> <p>The topic of this thesis was initially born from my personal interest towards ways to cope with anxiety. I've seen goalies play way below their actual skill level at the start of games, and oftentimes they say the reason is that they're nervous. It makes their movement look awkward and they say they can't get their mind set. I want to be able to provide tools to get over that anxiety. On the other hand, I've seen goalies play spectacularly right from the start in an important game, and hold off a one goal lead and win the game when the pressure is on. I want to learn what goes on in their minds during those times.</p> <p>The goal of this work was to put together a manual for dealing with pressure in a way that the theory and the practical exercises would be easy to understand and apply into daily use. The manual will reinforce Team Shutout Goalie School's programs by introducing and firming the mental aspect of the game. The plan is to incorporate the manual into Team Shutout Goalie School's programs designed for motivated AAA-level goaltenders.</p> <p>The manual came out as planned. It is easy to read, the concepts are understandable and the examples are ice hockey goalie specific.</p>	
<p>Keywords Performance pressure, Coping, Ice hockey Goalie, Mental Training, Manual</p>	

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1 Introduction

“Ninety percent of the game is half mental.” These wise, somewhat puzzling words were voiced by the late baseball great, baseball Hall-of-Famer Yogi Berra. When competing at a high level of any sport, athletes are faced with opponents with more or less similar physique, technical skill set and tactical knowledge. Still, it is not rare to witness a team or an athlete to get absolutely blown out of the water by their opposition. Naturally the defeated side didn’t all of the sudden lose their ability to perform, nor did the winners suddenly boost their physical attributes. Oftentimes it is the mental side of the game that makes the difference.

I used to play a goaltender in ice hockey when I was younger and I was always a nervous wreck come game time. The hours between waking up on a game day morning and the puck drop were filled with anxiety and my body felt stiff. That feeling maintained through the first few minutes of every game, and would then slowly dissolve. I might allow a goal or two during those first minutes or not, it didn’t feel like it was under my control. It was much later when I learned that there is actually something you can do to ease the nervousness and stress. I was already coaching at the time but I still played recreational hockey, where I would still experience the anxiety on game days, though not as powerful as when I was younger. I became very interested in mental coaching, especially the realm of stress management and coping with pressure. The final revelation happened, when I was able to use the tools I had read about to transfer my nervous feelings into enthusiasm and confidence, and was able to play great from the first second until the final buzzer.

This report focuses on the pressure athletes feel before or during their performance and provides different methods of mental training that can help to cope with it. There are two main motives behind this report. First, I want to be able to help the goalies I coach to bring out their best performances from practice setting into games. This can be achieved not only by working physically hard, but also by building their confidence and learning to focus on what matters. Second, I wanted to put my two cents into making Team Shutout Goalie School’s training program more complete. Team Shutout

Goalie School, where I completed my work placement year, is a goalie school for ice hockey goaltenders located in Toronto, Ontario, Canada. They also have a location in Brampton, Ontario. They are one of the busiest goalie schools in the Greater Toronto Area and their instructors have an outstanding knowledge of goaltending in ice hockey. The newest addition to their program is cooperating with FITS Toronto, which allows the goalies to get their off-ice training planned and supervised by experts. With these two aspects of the game in place, we felt a guidebook for strengthening the power of mind would be a piece that could fit well into the puzzle. Due to the small amount of sports psychology material directed specifically towards ice hockey goalies, this report includes general sports psychology texts and studies. This material is then edited to fit the needs of an ice hockey goaltender in the final product.

2 Ice Hockey Goaltender – A Brief Introduction

In ice hockey, a goalie is responsible for preventing the opponent from scoring a goal by keeping the puck out of the net. This is achieved by making saves, which generally requires a goalie to constantly adjust his/her positioning according to the movement of the puck, as well as reading the game and anticipating the opponent's next move.

(Guay, 2014, 14, 16.) Ropponen (2016, 65, 74-75) highlights the importance of goalies' diverse skill set in both skating and goalie-specific movement. Combining fluent movement with good game reading skills allows the goalie to maintain effective positioning during changing situations. This makes the process of making the actual save a lot more controlled. In addition, a goalie needs to be able to participate in playing the puck more than before, which requires not only the ability to skate and read the game but also sufficient stick-handling skills. Bell et al. (2008, in Kilpivaara 2012, 5) note that if an ice hockey goalie is striving for elite level, he or she needs to be quick in decision-making, moving and reacting, he/she needs to be agile and able move explosively, as well as have good hand-eye coordination and flexibility. The position of a goaltender in ice hockey is completely different compared to the position of forwards or defence-men. Every team needs solid goaltending in order to reach high goals. (Kilpivaara, 2012, 2.) To further underline the gravity of a goalie in ice hockey, Guay (2014, 1) uses phrases like "The backbone of a hockey team". He also goes to describe it as the most important position in not only ice hockey, but in all sports. With the team's success relying so heavily on one individual athlete, it is easy to understand the pressure that comes with playing the position.

3 Dealing with Pressure

The term “pressure” alludes to factors and circumstances elevating the importance of performing well, and it is said to rise when the outcome of the competition is more important than usual, when there is a judging audience present, when the competition is tight, when the reward for an outstanding performance is high, and when the chance to success is narrowed down to just one (Gallucci, 2008, 200). Chamorro-Premuzic (2013, 36) suggests that anxiety is an emotional reaction to a dangerous situation, evoking the fight-or-flight instinct. As an athlete you might feel anxious about your own ability to perform, or what people in the stands think of you. The most universal source of pressure within athletes is the fear of failure. The very idea of failing and what it might cause (humiliation, disappointment of friends and family, not achieving the dream and so on) is enough to make you feel threatened by the upcoming competition. With this state of mind you are actually setting yourself up for the one thing you’re trying to avoid; failure. (Taylor, 2017, 15.)

Pressure can present itself in many ways in how we think, act, and feel. It can make us worry and think about failing, we might start to talk fast and hurry, our breathing gets shallow, we feel stress, maybe even panic or fear, and our muscles tense up. (Smith & Kays, 2010, 150-151.) A subpar performance under pressure during a competition is often referred to as “choking”. Choking does not happen because the athlete isn’t trying hard enough or doesn’t possess the required skills. It happens because pressure often debases skilled performance by making the athlete’s attention shift from process to outcome. (Gallucci, 2008, 200-201.) It may feel like there is nothing you can do about it, but you can learn to control anxiety, and to deal with pressure. It all begins with recognizing the symptoms in your body and mind. (Hampstone, 2016, 53.) Pressure comes from inside of you, and you are the solution (Smith & Kays, 2010, 150).

3.1 Relaxation

Pressure and stress can cause physiological reactions such as muscle-tightness. In sports, this uncontrolled muscle activity hinders coordination exacerbating performances where precise motor control and decision-making are needed. In

addition, when the muscles are tight, they are working, which means a person experiencing muscle-tightness caused by anxious feelings will fatigue faster. (Gallucci, 2008, 112.) Being too tight is one of the most common performance problems, and telling someone simply to relax won't help if they don't know how to do it (Miller, 2010, 87, 93). Relaxation is a skill that can be learned through practice (Hampstone, 2016, 74). Finnish ice hockey coach Rauno Korpi says that while a relaxed performance looks easy and effortless, a great amount of work and practice has been put in towards achieving it (Hämäläinen, 2012, 151).

Active relaxation is a technique that helps to release physical and mental tension. It makes you tense up one muscle or muscle group at a time, after which you release the muscle. The release of muscle tension causes feelings of physical relaxation recharging your mental and physical energy levels. (Hampstone, 2016, 74.) Miller (2010, 93) calls this technique the Tension-Release technique (also known as Progressive Muscle Relaxation or PMR, developed by Edmund Jacobson in the 1930s (Gallucci, 2008, 114)) and according to him this treatment exaggerates the feeling of release, as well as helps you focus on and develop the mind-body connection. After all, "Mind and body are one." (Miller, 2010, 88.)

Hampstone (2016, 74) guides us through the active relaxation process as follows:

- Start with the muscles of your feet
- Tense all the muscles of your feet fully and hold the tension for a while
- Release
- Take a deep breath in and out
- Move up the body to the next set of muscles
- Go through each set of muscles, including the muscles of your face

According to Gallucci (2008, 117) every muscle or muscle group should be tensed for about five to seven seconds and relaxed for 30 to 40 seconds. The tensing of the muscle should be performed in a way that pain is not present and in a position as comfortable as possible, usually sitting down with head and spine supported. This

technique doesn't only focus on relaxing the muscle groups, but it helps you to manage anxiety when you notice you're feeling it (Miller, 2010, 94).

With training, the PMR can be performed faster by combining different muscles groups and tensing-releasing them simultaneously. An example of this is a four-step program in which both arms and both hands are first flexed and released at the same time. Next the muscles in face and neck, then chest, shoulders, back and abdomen at once. The last step includes the tension-release of both legs and both feet. If an athlete can perform these four steps effectively, relaxation can be reached in about ten minutes. If combining different muscle groups causes trouble, a step should be taken back to practice tension-release of an individual muscle alone. The quickest way to perform PMR doesn't include any physical activation of muscles, but relaxation is achieved via evoking the senses of relaxation in the certain set of muscles using cue words such as "OK, relax". To be able to successfully achieve relaxation using this technique, an athlete needs a lot of practice, as well as mastery of the previous steps of PMR progression. Should this method be unsuccessful, the procedure needs to be scaled back to actual muscle activation. (Gallucci, 2008, 118.)

As soon as you are able to recognize symptoms of pressure in your body or mind, you can start working towards controlling them and not letting them affect your performance (Smith & Kays, 2010, 151). Being able to control stress and its symptoms improves performance and raises the levels of self-efficacy (self-efficacy discussed in more detail in chapter 4). The use of PMR has been linked to better performance lessened anxiety among athletes. For example a study by Lanning & Hisanaga (1983) demonstrated female high school varsity volleyball players to feel less nervous and to serve more accurately after PMR. An other study conducted by Maynard, Hemmings & Warwick-Evans (1995) showed PMR to eminently abate the feelings of anxiety among semiprofessional soccer players. (Gallucci, 2008, 112, 119.) In daily use, you will learn that active relaxation helps you to release strong negative emotions as well as physical tension caused by nervousness (Hampstone, 2016, 76).

3.2 Breathing Techniques

Breathing is essential. For a long time people have used breathing as a psycho-physical bridge to connect mind and body in order to get closer to inner peace or increase consciousness. More recently it has also been used to improve performance. People who perform well seem to be relaxed and full of confidence, their breathing is natural and easy and they don't think or analyze their performance. (Miller, 2010, 106.) During a pressure-filled competition athletes can forget to pay attention to their breathing, making it shallow or even hold it for long periods of time unknowingly. Oxygen is vital to performance and a shortage of it caused by shallow or held breathing will lead to an impaired performance. The symptoms include muscle-tightness, earlier fatigue, and loss of fine motor control and balance. When attention is paid to breathing and oxygen is flowing in your body, all of these symptoms are counteracted, elevating the level of your performance. The effect is strong on the mental side as well, since controlling your breath can beget the feeling of overall control, which then contributes in decreasing nervousness and stress. (Taylor, 2017, 212-213.)

When performing under pressure, the first key point of breathing is rhythm. Monitor your breathing, take your time, don't rush it. Take six breaths to feel the rhythm of your breath and allow yourself the time to inhale all the way in and exhale all the way out. You shouldn't force the rhythm or control it too much, but rather just experience it. (Miller, 2010, 110, 116-117.) This helps you to achieve a calm state of mind (Hampstone, 2016, 108).

The next key of breathing is connecting the breaths with thoughts. Simply put, you breathe in positivity and breathe out negativity. After you have found the calming rhythm of your breathing, imagine drawing in energy and inspiration each time you inhale. The inspiring thoughts are up to you; use what ever makes you feel stronger and more confident. Inhaling inspiration also works as a reaction to unwanted events. This is called response-ability. Here's an example: Say you made a mistake or someone said something insulting to you. Instead of letting it affect you negatively, use it as a cue to breathe in those powering thoughts and exhale the bad air. You are

now refocused and back in control of the situation. (Miller, 2010, 121-124.) This single breath taken in the middle of a competition or other pressure situations is described by Selk (2009, 23) as a centering breath. It is meant to lower your heart rate and clear your mind. The formula used by Selk is 6-2-7: inhale for six seconds, hold for two seconds and exhale for seven seconds. That is one fifteen second breath and those fifteen seconds can feel long in a pressure situation when your mind is rushing. And that's why you need to use all of those seconds. If you can't do it, it is a clear sign you need to try again. The technique of centering is further described by Gallucci (2008, 128) as a method to be used in order to shift the focus from external factors to internal factors, to yourself. Notice if you are tightening your muscles, notice your breathing patterns. If your breathing is off, calm down and find the rhythm. If your muscles are tense, breathe deep and imagine and feel them relax. Use centering breaths when the pressure is at its highest, as well as during the breaks in a competition.

Third key of breathing is continuity, the ability to feel a constant flow of energy through breathing. It means connecting each inbreath to each outbreath and vice versa in a calm rhythm, inhaling positive thoughts and exhaling negative thoughts. This breathing pattern can be visualised as waves of the ocean that keep gushing in, or as a wheel that turns like a clock – up from 6 to 12 on the inbreath, and down from 12 to 6 on the outbreath. (Miller, 2010, 133, 136-137.)

If you want breathing techniques to help you perform, you need to practice them. Start with 10 minutes a day, every day of the week. Focus on how much time it takes for you to reach a calm state of mind. With deliberate practice you will be able to shorten that time. (Hampstone, 2016, 109.) Miller (2010, 143) suggests that you start practicing in non-threatening situations. Once you learn to access the feelings of ease without any stress, you are more likely to achieve them under pressure as well. To ensure you get enough practice and repetition on breathing techniques, make them a habit by including them into your every-day training routines. Use them during your warm-up. Before each drill, practice breathing in order to reach to

optimal state of mind. Check your breathing during the breaks in your practice to maintain that mindset. (Taylor, 2017, 214.)

3.3 Positive Thinking

Negative, limiting beliefs such as *I don't have what it takes* or *I'm not good enough* create the mind-set that keeps you from achieving and makes you fearful in competition (Porter, 2003, 122). It is very common to have emotions loaded with anxiety and nervousness when under pressure, and those emotions have a direct effect on how you think (Miller, 2010, 75-76). Furthermore, your thinking alters the physical feelings in your body. Sensations like distress and panic cause faster heart rate, shallower breathing and tightness in your muscles, all of which impair your performance. (Smith & Kays, 2010, 108.) There are some 50,000 to 60,000 thoughts going through our mind every day and based on research up to two-thirds of those thoughts might be negative, particularly in a pressure-filled situation (Miller, 2010, 23). A study conducted by Van Raalte, Cornelius, Hatten & Brewer (2000) showed that the thoughts and emotions of adult tennis players were more negative than positive during a match. In fact, 94 % of the players reported experiencing limiting thoughts and negative self-talk as often as six times during a match. In comparison, the amount of positive self-talk at a same frequency was reported by just 11 % of the players. (Gallucci, 2008, 91.)

The way you think affects the way you feel and behave, and the things you tell yourself are powerful, whether they are positive or negative. You can learn to control these thoughts and improve your performance through them. (Smith & Kays, 2010, 105.)

The key here is being aware and recognizing the negative emotions and thoughts (Miller, 2010, 78). You also need to accept that there is a wide spread of emotions involved in sports and other fields of competition. What this means is you can't expect to feel good all the time. There will be moments of frustration, displeasure and desperation as well. When you perceive a negative emotion, try to take advantage of it in a healthy way, by transmitting that energy into something positive, for example heightened motivation. (Taylor, 2017, 172.) According to Baum (1999, 113) aforementioned technique can be utilized to shift your attention from your athletic limitations towards your strengths. Changing the aim of your focus like this can abet a

certain action or outcome, thus being an excellent tool when learning or improving a skill, or breaking a bad habit.

Belief is a strong weapon. Believing in yourself and in your abilities won't guarantee that you win, but it can take you closer to the position to win. What do you believe in? Are you a starter or a bench-warmer? Muhammad Ali once said: "To be a great champion you must believe you are the best. If you're not, pretend you are". When Tiger Woods turned pro he said he is expecting himself to win every time. Was he being cocky? No. He was sharing his belief. Now ask yourself, if you don't expect to win every time, how can you expect to compete? (Mack & Casstevens, 2001, 109-112.) Oftentimes we look for acceptance and admiration from other people while not giving those things to ourselves. The most essential kind of acceptance has to come from within and if it doesn't, it is hard to appreciate praise from others. You can strengthen your self-belief through positive assertions. Let's say a fear of making a mistake is decreasing your ability to perform. Change your approach by changing your attitude about mistakes, and write down positive assertions like "It is okay to fail", "I learn from my mistakes" or "It's easy for me to let go of it". Maybe you just feel like you don't matter and your feeling of self-worth is low. Change the attitude. "I deserve respect", "I matter" or "I trust myself and I am proud of myself" for example. What ever it is you're lacking confidence in, affirmations like this can help to transform your views of yourself and your capabilities. (Porter, 2003, 122-123.)

3.4 Power Words

Power words or power thoughts can be profitable when enduring a moment of pressure. They should be positive and relevant, and loaded with feelings like control, power and confidence. Make sure you like the power words you choose. Memorize them and use them often, since your power words will be stronger and have greater effect when they become a habit through repetition, evolving into a vital source of positivity and ease when the pressure is rising. (Miller, 2010, 28, 41.)

Power words can also be instructional, in which case they are used in a skills training that demands concentration. Instructional power words have been shown to improve

performance on tasks that necessitate anticipation, detailed motor movements and fluent use of different strategies. Improvements in performance with use of power words was seen for example in elite skiers, figure skaters and hockey goalies. A study by Johnson, Hrycaiko, Johnson, & Halas (2004) showed heightened shot accuracy in elite, under-14 female soccer players when using a power word “downlock”, which anchored their focus to the correct technique of locking their ankle while pointing their toe downwards. (Gallucci, 2008, 92.)

3.5 Mindful Approach

Using mindfulness when encountering anxiety can be beneficial for some athletes. With it, the feelings of nervousness and pressure are faced and observed as they are. The main point is accepting those feelings rather than trying to eliminate them and their sources. (Silverton, 2012, 100.) Mindfulness allows you to become a spectator in the midst of your feelings and thoughts. With this ability you are no longer only a passenger in the flow of emotions, you are an active observer of the actual thoughts and feelings going through your head during pressure-evoking situations. (Tobler, Herrmann, 2013, 180.) The method was developed by John Kabatt-Zinn in the 1970s and it is known as Mindfulness Based Stress Reduction (MBSR) and using it as a treatment for stress and depression has been shown beneficial. As you experience what happens around you and the feelings these events bring up, try not to let your opinions, prejudices or expectations get in the way. Be present in the moment and accept it. You might find new, different aspects and points of view, which can lead you to choices you’d never thought of before. (Hyppönen, 2011, 105-106.)

In order to further explain mindful approach, the following table compares a stress reaction and a mindful reaction in a situation where an athlete is suffering from performance pressure caused by previous losses (table 1.) (Silverton, 2012, 107).

STRESS REACTION**MINDFUL REACTION**

Body Shallow breathing, tightened muscles, stomach cramps.	Body Slow down, check your breathing and the feelings in your body.
Thoughts A vivid memory of getting defeated in the past.	Thoughts No game is the same. It's in the past. This game is a new chance.
I'm no match for these guys, I'm not as good as they are	I've been working on my skills and my physique. I'm confident in my abilities.
I'm probably going to lose today, too. I should quit and go home.	The image of the unsuccessful performance is just a nasty memory.
I don't want to feel this way. I'm so nervous I'm probably going to fail.	It's just the fight-or-flight kicking in. I'm not in real danger. These feelings are normal and even though I don't like them I am allowed to experience them. They will pass.
Emotions Fear, shame, anger.	Emotions Benevolence, peace.

Table 1. A comparison between a stress reaction and a mindful reaction

4 Focus

In order for you to compete at a high level, you need to be able to resist distractions before, during and after your performance. Distractions can be internal, like self-doubt or fear, or external, like the environment where the competition takes place. (Lardon, 2008, 67.) These distractions are either relevant or irrelevant to your performance. If there is nothing you can do to control them (external factors), they are irrelevant and if you can control them (internal factors), they're relevant. It is important that you learn to tell the difference between the two types of distractions, and aim your focus towards the ones that are under your control. (Smith & Kays, 2010, 76-77.) A lot of athletes misunderstand the concept of focus by thinking that it means concentrating on one thing for a long period of time (Taylor, 2017, 154). For example staring at a basketball or a tennis ball, studying the details and structure of the object (Baum, 1999, 118-119). If we think about the complexity of these sports, the advantage from the aforesaid type of concentration is probably little. The point of focus needs to be clear to yourself, since it is very difficult to try and focus if you don't know where to concentrate your attention to. Focus on things that can make you perform better. It can be a technical detail, a tactical approach or even the opponent. (Taylor, 2017, 153-154.) According to Moran concentration and focus will not happen by chance. The first and most important step is to decide to focus. (Mellalieu & Hanton, 2009, 203.)

4.1 Routines

Routines help you to steer your focus away from distractions and keeping it where it needs to be (Smith & Kays, 2010, 135-136). Going through your routines before competition can also help you feel familiarity, feel like you've done this before, as well as a sense of control and order (Gallucci, 2008, 70). Taylor (2017, 201) points out that routines prepare you for unexpected events, too, if you have a plan for them. You will feel calmer and more focused before and during the event if you decrease the amount of things that can go south (if possible) and be ready for the ones that do.

Your routines should arguably encompass all of the factors that can have an effect on your performance, for example sleep and diet (Gallucci, 2008, 70). Regardless, we will

here focus on the pre-performance routines taking place at the site of the competition. Pre-performance routine is personal, so you need to figure out what kind of routine works best for you. Start by making a list of all the things you need to do in order to feel ready to perform. The content of the list and the order of the actions are entirely up to you. (Taylor, 2017, 207.) Gallucci (2008, 72) presents a detailed, even superstitious pregame routine of National Baseball Hall of Famer Wade Boggs as follows:

- Eats chicken every day.
- Grows his beard when hitting well, and shaves it when he hits a slump.
- Draws the Hebrew letter ‘Chai’ in the batter’s box
- Does everything at the same time every day: Eats at 2, leaves his house at 3, changes into uniform at 3:30, goes to the dugout at 4, takes grounders at 4:15.
- After the grounders, he ends the drill at 4:40 by stepping on third base, second base and first base, then steps on the foul line and takes two steps in the first base coach’s box before heading for the dugout.
- When taking his position each inning, he steps over the foul line.
- Runs wind sprints at 7:17 to signify a 7-for-7 game.
- Has lucky bats, gloves and t-shirts that can turn into unlucky bats, gloves and t-shirts when he hits a slump.
- Throws the ball against the dugout wall for five minutes before each game.
- Leaves his glove and ball in the same spot in the dugout every game.
- Arranges pine tar, weighted doughnut, and resin in a precise way in the on-deck circle and applies them in that order.

Boggs’ pre-performance routine has been described as ritualistic or rigid, but the opposing view is that it probably helped him feel in control and play his best even when facing major distractions, such as the passing of his mother (1986), and a lawsuit (1988), during a season.

Healthy routines are something you consistently go through in order to enhance your focus and performance. If those routines become compulsive, meaning that you absolutely must get them done in a same exact manner every time, your focus has shifted

from the upcoming performance to the routine itself. This means you are now all zoomed in on the routine-part and not getting mentally ready for the game. The routine has turned into a superstition, a ritual, which can be detrimental for your athletic performance. You should allow your routines to have some wiggle room in case the necessary space, time, or equipment isn't available. Monitor your routines. If they help you get your mind set, good, but if your focus is entirely on getting the routines done, you need to step back and re-evaluate them. (Smith & Kays, 2010, 137-138.)

In comparison to Boggs, a more mainstream approach to a game-day routine usually consists of things like the arrival at the site (how much earlier do you want to get there before the competition starts), deciding on a few key objectives, visualization, checking the equipment and setting them up in a certain way, physical and technical warm-up, and listening to music and getting mentally ready (Smith & Kays, 2010, 139-142).

When planning your routine, take in consideration that you won't always be competing at your home venue. Think of other venues you've been to and try to find things they have in common. This helps you build a routine that can be performed almost a same way almost everywhere. Playing at different venues is just one of those factors you can't really control. That is why your routines need to be flexible so you can still get prepared even if conditions change. (Taylor, 2017, 201, 207.)

You don't want to stick to your routine so strictly that disrupting it causes anxiousness (Gallucci, 2008, 70). Your routines can, and probably should, evolve, too. Monitor your routines and make changes when you think it is necessary. The simplest way to evaluate your routine is to check if you feel comfortable during a competition. If you are feeling unconfident, unmotivated, or start out the competition too slow or too fast, and make easy mistakes, you need to adjust your pre-game routine. (Smith & Kays, 2010, 148.) Braden Holtby, the goaltender of the NHL team Washington Capitals, has a very detailed, multi-step pregame routine. So much so that Mitch Korn, his goalie coach, had to voice out his concerns about it to Holtby. Holtby assured that even though the routine is extensive, he was in control over it and that the routine did not control him. Holtby won the Vezina Trophy as the NHL's best goalie in the season 2015-2016 and the Stanley Cup in 2017-2018. Two other NHL goaltenders (Thatcher

Demko, Vancouver Canucks, and Jimmy Howard, Detroit Red Wings) found that their pregame routine was, in fact, tiring them out both physically and mentally. Both goalies were told by either their goalie coach or a sports psychologist that they needed to cut stuff out of their routine. Demko says all he did before a game after that was listen to some music, had a coffee, played a bit of soccer and played great on the ice. Howard stopped thinking about the game before he gets to the arena. Later on both goalies have brought back the key elements of their old routines, while still keeping things lighter. (Woodley, 2019.)

4.2 Distractions

Athletes perform at their best when their focus stays in the present moment. Deviations from the ideal performance takes place when focus drifts to either future events (the outcome of the ongoing game) or past events (past mistakes). A typical example of a slipping concentration occurs in team sports when a team scores a goal and quickly allows a goal against, due to focus altering towards the outcome of the game. Getting ahead or getting stuck on a timeline can be seen as an *internal distraction*, which stems from within the athlete. Internal distraction can also present itself in a form of worry, stress and negative self-talk, withdrawing the attention away from the performance. (Gallucci, 2008, 99.) Moran brings up a well-known example of a high-priced impact of internal distraction, where a golfer named Doug Sanders missed a putt of less than three feet at the 1970 British Open. Should he have made the putt, he would've won the major tournament and the ten million pound prize-money, as well as gained future tournament invitations and advertisement deals. With all this on his mind Sanders got ahead of himself and instead of focusing on the seemingly easy putt, his mind wandered into the future, the victory speech and which section of the crowd he was going to bow to, causing him to miss the putt. (Mellalieu & Hanton, 2009, 201-202.) These symptoms are born inside your head but they manifest themselves as physical reactions such as stomach cramps or tight muscles. It is not difficult to notice these symptoms but it can be troublesome to cope with them if you don't know how. With consistent effort and practice, you can equip yourself with mental tools to deal with internal distractions. First, check where your focus is. If it's not on the now, the present moment, it is in a wrong place. Focus on the process and what it takes for you to be successful

in the situation happening right now. Then repeat that, play after play. Don't even think about the outcome of the game. Second, concentrate on things you have control over, such as the quality of your day-to-day training and diet. Knowing you have put in the work and have what it takes to play at your best will increase your confidence and decrease the amount of pressure you feel. You can also use some breathing techniques covered in chapter 2. (Smith & Kays, 2010, 80-81.)

External distractions are things that exist regardless of your actions and are thus uncontrollable. These kind of distracting factors can be for example an unfamiliar venue, fans, behaviour of the opponent, or the scoreboard. External distractions can disarray the focus of an athlete or make them exceedingly self-conscious, therefore garbling the execution of a skill and hindering the performance. (Gallucci, 2008, 99-100.) Even though the impact of external factors can be sizeable, they are trivial to your performance and should be treated as such. You might say that your focus got fractured by a crowd that was bad-mouthing you when in reality it is false to be claiming that. Sure a bad play might have been the outcome caused by the distraction, but you made the choice to direct your attention to the crowd's taunt instead of your own performance. It is pivotal to differentiate the controllable and uncontrollable factors in the battle against external factors. Once you've sorted out the uncontrollable, it is much easier for you to focus on the factors that are under your control. Another thing you can do to help you maintain your focus is preparing to face the distractions, especially the ones that have previously been causing you problems. Generate a strategy for staying calm and collected when they surface, and use imagery to see the new plan in action and yourself handling the situation perfectly. (Smith & Kays, 2010, 83-84.)

4.3 Imagery

Imagery is the action of deliberately bringing images to mind or practicing a physical task or a skill without actually engaging in the activity in question. The term "visualization" is sometimes used as a synonym for imagery, but imagery should involve all of the senses and not be limited to only visual stimuli. (Gallucci, 2008, 84.) By using all senses you will activate both sides of your brain as well as send small commands into your body through your neural pathways, engaging the muscles you would use during

the real physical performance. (Baum, 1999, 79.) It is not uncommon to see athletes moving during their imagery sessions. Some athletes like subtle movements and others use movements that are broader, and neither style is weaker than the other. Use whichever ever feels comfortable. Mimicking the actual movement patterns brings imagery out of your head, binding your motor system into the experience, creating a stronger physical perception compared to imagery happening only in your imagination. (Taylor, 2017, 199.)

Athletes typically choose to use one of the two points of view, or “camera angles”, when performing imagery. The most common perspective is the one of your own, meaning that you are imagining the performance through your own eyes and seeing the events as you would in a real situation. This is called internal imagery. The other option is to imagine watching yourself from the stands as an outsider rather than the performer, and this is referred to as external imagery. (Smith & Kays, 2010, 89.) Selk (2009, 52) introduces a third point of view, in which you are in the stands watching someone other than yourself performing the task. In this form of imagery you are picturing someone who is stellar at the task you want to perform. Picturing someone else can be beneficial when aiming for the perfect execution while not yet possessing the skills needed for it (Porter, 2003, 65).

The aim is to see yourself delivering a faultless performance (Smith & Kays, 2010, 93) or at least to see what it takes for you to be successful (Selk, 2009, 55). It is easier said than done, though, and you might find yourself failing during imagery. In other words you are not in control of what you’re trying to picture. Uncontrolled, failing imagery can be caused by lack of confidence in your own capability to execute the task at hand the way you want. Another possible reason might be insufficient knowledge of the performance or that the learning phase is still in process. You shouldn’t release the failed image and try to forget about it because it can make the undesirable picture stronger, taking you even further away from controlling your imagery. Keep picturing until you get it right. (Taylor, 2017, 192.)

The speed of your imagery needs to be considered as well. It is important that you're able to modify the pace according to the goals of your imagery session. (Taylor, 2017, 193.) Nervousness can cause you to perform imagery too fast if you are not in control of it, making your actual athletic performance rushed and overcharged (Selk, 2009, 57). To avoid this, Gallucci (2008, 87) suggests that athletes paired imagery with different kinds of relaxation techniques in order to process stressful situations in a relaxed state of mind. This combination of mental exercises could promote the lessening of anxiety come game time. Imagery happening at a real time speed or "game speed" is recommended when you want to get mentally set for the actual speed of your sport. It prepares you for the pace you want to perform at in a competition. Doing imagery in slow motion can be used when working on technical details. You want to see yourself executing the technique perfectly and you can go through imagery as slowly as necessary in order to achieve that. When you get it right and you're comfortable with it, increase the speed little by little until you reach game-speed. You would start slowly if you were physically learning a skill and it is the same thing with imagery. Slow motion permits you to calmly focus only on the technicalities and feeling the control of your movements, as well as gives you time to get the needed amount of repetitions in. (Taylor, 2017, 193-194.) Remember that imagery can support regular physical training when the skills have been learned, but physical practice cannot be replaced by it (Gallucci, 2008, 85).

To get the most out of imagery you should try to use all your senses, as mentioned above. Don't just see yourself, see the venue as it would be on a day of competition. See the field, see your teammates, the opponent and the crowd. Feel the temperature, feel your equipment on you. Feel your body being warmed-up, strong and ready to go. Hear your teammates talking and the coach psyching you up. Maybe there is music playing. Is the crowd cheering? What does it smell like at the venue? Try to bring back the usual smells you typically notice at the field of your sport. Taste the water or the sport drink you have in your bottle, or the salt in your sweat. Feel the excitement, focus and confidence as you get ready to perform. (Smith & Kays, 2010, 103-104.) By engaging as many senses as possible you are re-producing the actual event of competi-

tion and the sensations that go into it. Seeing yourself perform perfectly in that setting can help you cope with pressure in real competition. (Taylor, 2017, 195.)

Imagery has been criticized for being “little more than wishful thinking”. However, imagery has plenty of benefits from the psychological point of view:

- It creates a mental picture on which an athlete can rely on, and compare and evaluate their physical performance with. When the athlete tries to match the physical performance with the mental picture, skills are improved.
- Successful imagery can inspire the athlete towards successful performance.
- Feeling confident and competent during imagery can boost the athlete’s self-efficacy, diminishing the feelings of anxiety and nervousness.
- It can shift the athlete’s focus from self-doubt to the things needed for successful performance.
- It can help in goal-setting, make the athlete appreciate their goals more and to believe that the goals are reachable.
- The combination of mental and physical training accommodates complex skills to become automatic.
- The athlete can use the mental picture to find a solution if they have a problem in their game, as well as anticipate certain emotions, such as nervousness, and mentally prepare for that.
- When nervousness is created through imagery, athletes can see themselves performing perfectly regardless of it. They learn that stress is controllable and this realization can decrease anxiety during the actual performance.
- Imagery performed right before competition can fire up and activate the muscle groups needed for the performance.
- It appears to be an efficient method to invoke the level of mental intensity to the same level it would be on during an actual performance. (Gallucci, 2008, 88-89.)

5 Self-Efficacy

According to Short & Ross-Stewart, self-efficacy (the term first introduced by Albert Bandura in 1977) is defined as one's belief in his or her competencies to organize and perform the necessary actions in order to reach given goals. Self-efficacy and confidence are often presented as synonyms in sport psychology even though confidence is a lot less specific term. Confidence is more familiar to athletes and coaches as a word, referring to strength of belief. It doesn't indicate the direction of the belief, meaning that an athlete can feel very confident in both succeeding as well as failing. Self-efficacy is the belief an athlete has towards his or her own abilities, incorporating the aspects of the assertion of the ability, and the strength of the belief, and the two should therefore be differentiated. (Mellalieu & Hanton, 2009, 222, 224.) The prediction of future success is mirrored by self-efficacy and it becomes high in value particularly in situations where an athlete is competing against an opponent that is unfamiliar to them, or the opponent is evenly matched with them. In both cases, an athlete cannot be certain of their success, making self-efficacy an important performance determinant. People with high levels of self-efficacy are more likely to take on a challenge or an ambitious assignment, they maintain belief in successful results, and they won't back down easily even when facing pressure or setbacks (Gallucci, 2008, 169-170.)

Short & Ross-Stewart present a number of different kinds of self-efficacy beliefs, multiple of which are relevant to athletes. *Coping efficacy* is the belief an athlete has towards their ability to handle different distractions such as anxiety, negative self-talk or injury. *Collective efficacy* is the belief a group has for the group's capabilities to be successful. This is also called team efficacy. *Competitive and Performance efficacy* refers to athlete's beliefs in his/ her skills when facing an opponent during a competition. *Learning efficacy and Task efficacy* point to the belief of being able to learn new skills and complete and perform certain tasks. *Self-Regulatory efficacy* is the belief an athlete has towards the ability of being in control of his or her emotions, thoughts and behavioral patterns. (Mellalieu & Hanton, 2009, 223.)

When you have a set goal in your mind you need to prepare to face disappointments during the pursuit. If you have high self-efficacy, you are able to bounce back quicker, reinforce the optimism and keep going after it. With low self-efficacy, you might not be setting your goals very high and instead of pushing yourself in the face of difficulties, you lessen your efforts and settle for moderate results. It also makes you view arduous tasks as threats, not as challenges or opportunities. With this mindset you are creating a cycle in which an expectation of poor performance leads to a poor performance, which then leads to desponding and expectations of failing again in the future. You are doubting your skills. In comparison, with high self-efficacy you will blame difficulties or mistakes on lack of effort rather than lack of skill or talent. There is a competition in your head between self-doubt, worry and fear of failure, and the trust in your own technical and tactical skills and capabilities needed to be successful. Therefore it can be derived that the level of self-efficacy has an impact on the level of performance anxiety. (Gallucci, 2008, 172-174.)

5.1 Sources of Self-Efficacy

So where does self-efficacy stem from? Encountering success elevates self-efficacy levels, and the heightened self-efficacy furthers the likelihood of future success. It is important to keep in mind that success itself is not the main influencer of self-efficacy, but rather the understanding of the amount of work put in by the athlete in order to achieve the experienced success. Building up a strong self-efficacy calls for experiences of triumphing over obstacles and learning to endure during tough times. Going through events of persistency teaches athletes that succeeding at difficult tasks takes prolonged effort and discipline, and helps them realize how to manage that kind of a process. On the contrary, a self-efficacy constructed on easy successes is liable to diminish when an athlete faces failures early on or has to keep putting in continuous effort in order to be successful. (Gallucci, 2008, 179.) This is what Short & Ross-Stewart (in Mellalieu & Hanton, 2009, 226-229) call *Past Performance Accomplishments* and it is where the athletes gather the most efficacy information from. As the athlete attains more and more experience on a certain performance or task, that performance develops into a more potent predictor of self-efficacy than self-efficacy is of performance,

because self-efficacy gets ingrained in performance outcomes. To build self-efficacy through performance success, the training event should be designed in a way that it makes an athlete feel successful, and that the success is a result of their own efforts. This can be achieved with drill progression, physical guidance and equipment alteration, all of which improve the skill little by little until the aids can be withdrawn. The aim is to create self-directed mastery experiences, which credit the athlete's own skills, not the external aids.

Observational Learning or *Vicarious Experience* is used by athletes to assess their own efficacy by watching others. They observe people that are similar to them, weighing the level of their competence. Seeing the same type of people succeed or fail respectively either heightens or lowers the observer's feel of efficacy. A vicarious experience typically increases self-efficacy when monitoring someone of the same sex, approximately same age and with no known sports background. A study by McGullagh (1987) showed college women performing better at a balancing task when they were told that the model who was observed had no background in sports. When the women were told that the model was a gymnast and a dancer, the results of the task dropped. (Gallucci, 2008, 180.) There is also instructional data to be gained from vicarious experiences, as stated by Short & Ross-Stewart (in Mellalieu & Hanton, 2009, 235-240). When observing a model in order to acquire new skills, the studies have shown that in most cases the most influencing quality of the model is their competence, providing the observer a mistake-free example. That alone is not enough for modeling to be effective, and it takes all of the following four conditions for the effectiveness to fulfill: (1) Attention. Attention must be paid to the model. (2) Recollection. Being able to memorize and remember the task performed by the model. (3) Production. Being able to physically imitate the observed task. (4) Desire. Possessing the motivation to learn the observed task. Observational learning can also be done as *self-modeling*, which means using one-self as the model by using video. This method strongly relies on the model similarity being the best way to gain self-efficacy, and no model matches you better than yourself. Videos made for the purpose of self-modeling should be kept short (maximum 5 minutes) and they should focus on no more than three skills at a time. The focus should be steered towards the skills the athlete feels are most important to

be successful. Self-modeling can be performed in two ways: feed-forward and positive self-review. Feed-forward is the process of analyzing technical and/or tactical errors in order to establish the possibility of correct execution in the future. Positive self-review means going through video clips of the athlete's best possible performances at a given time, sort of like a highlight-reel. The fundamental concept of self-modeling is to raise athletes' self-efficacy by exterminating the errors of their performance. Gallucci (2008, 181) suggests that for people with low self-esteem and low self-efficacy, a *coping model* is the most suitable form of modeling. It is a process where the observer is shown different methods of coping with anxiety, basic rules of problem solving, and that success does not occur because of talent, but is instead a reward for perseverance and continuous work. It is important that the observer realizes that a skill can be built and that they are allowed to make mistakes. The model should guide the observer through the task by voicing the process and the different maneuvers required by the performance step-by-step. The model can also tell about the previous difficulties and the actions they took to conquer them, bolstering the observer's belief in finding solutions and staying persistent.

6 Critique

Mental training and the studies supporting the benefits of it have not been uncriticized. Crocker, Tamminen & Gaudreau (in Mellalieu & Hanton, 2015, 52-56) point out several grievances of studies on coping mechanisms in sport over the past ten years. As reported by them, much of the research has been short-term and the data is collected from a single performance or a sporting event. This makes it difficult to predict the effectiveness of coping mechanisms during a season with changing climate within the sport as well as in the athlete's physical and mental states. Some methods might also be useful in short-term use, but defective in a long-term use. Other target for their critique is the way the data is gathered, which is commonly a questionnaire or a self-evaluation report. Athletes commonly feel good after a successful performance, which may cause them to evaluate the coping mechanism in question as more effective than it actually was. Instead of performance outcomes, coping effectiveness could be assessed by factors such as reducing of stress and unwanted emotions, increasing of positive feelings and control of the physical symptoms caused by anxiety.

Taylor (2017, 246-249) mentions that regardless of the influence the mental side has to their game, athletes use mental training methods surprisingly little. There are seven reoccurring reasons for athletes not to participate in mental training (figure 1.)

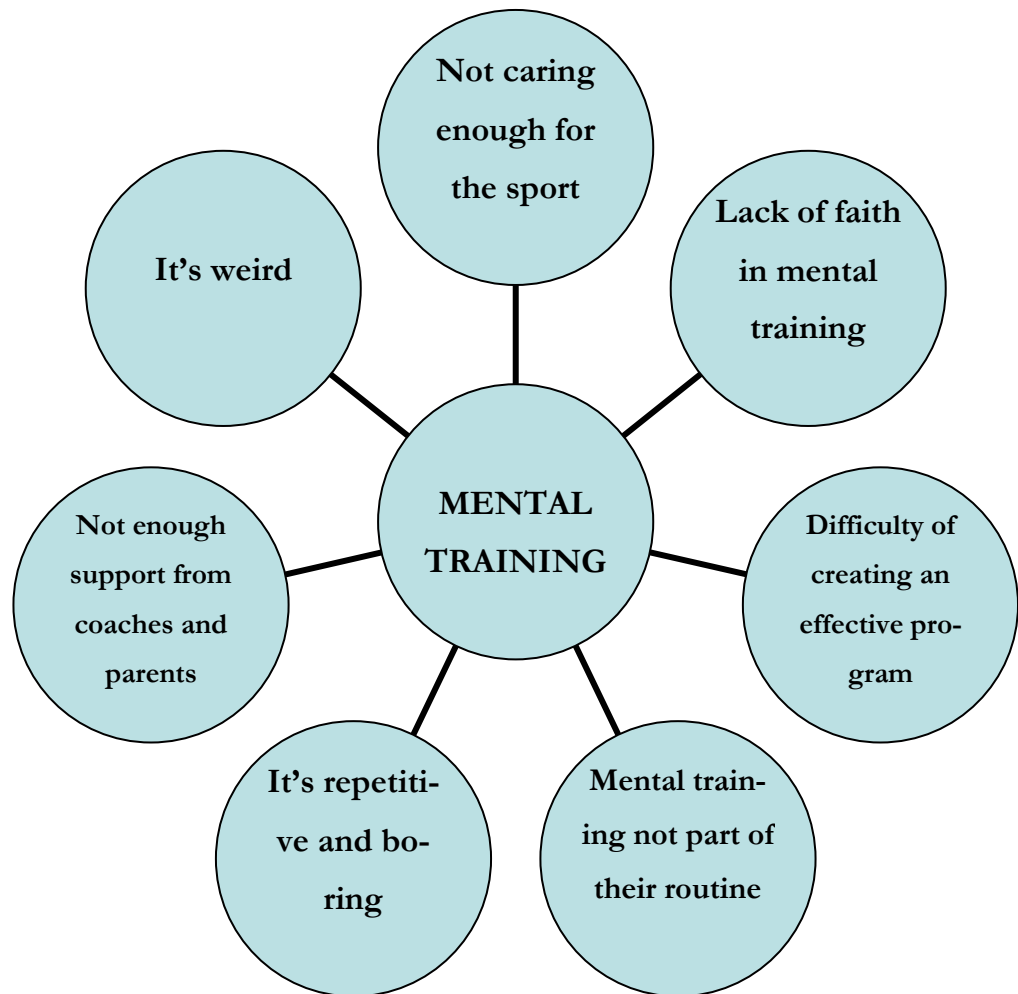


Figure 1. Seven reasons for athletes not to participate in mental training

7 Empirical Section

7.1 Planning

Pressure to perform can be crippling for ice hockey goalies. I've witnessed that pressure get the best of goalies leading to a subpar performance. I also have first-hand experience of it. When I learned about sports psychology, methods for coping with pressure immediately became my main point of interest and I had spent time studying the subject long before I started to work on my thesis. During my work placement year with Team Shutout Goalie School in Toronto, I asked them if a mental training guidebook would add value to their program. They were interested and we started deciding on the themes we want to include in the work. We ended up narrowing the report down to pressure and ways to cope with it.

The goal of the report was to introduce a variety of methods that would be easy to understand and easy to integrate into daily routines. Team Shutout Goalie School trains nearly 200 goalies every week so a strategy for the distribution of the manual from the coaches to the goaltenders had to be made. The most potent ideas for the use of the manual were including it in Advance Summer Camps as well as High Performer Programs. This way the manual would be directed towards motivated goalies and the topics in the manual, alongside with examples, are introduced by an instructor.

7.2 Implementation

I had a somewhat clear image in my mind about the topics I wanted to include in this report. After exploring literature regarding sports psychology that image maintained almost intact, and only a few changes were made due to findings better supporting the theme of the report. Some of the grand themes of sports psychology were left out intentionally because even though important in the realm of sports psychology, they were difficult to connect to pressure directly. Such themes were for example motivation.

I interviewed goalies of my club (K-Vantaa) from ages 18 to 13 and I wanted them to tell me about performance pressure. I wanted to know if they feel pressure in games and what is the main cause of it in their opinion. I also inquired if they had any ways of controlling/coping with pressure or if they wanted my help in finding coping mechanisms suitable for them. The results of these interviews further supported the list of themes addressed in this report.

An additional source of information towards this report was a chance to work with pro-level goaltenders playing in Erste League in Budapest, Hungary. Our discussions about performance pressure and the coping methods revealed that the topics in this work are recognized and implemented on daily basis by pro-level goalies all over the world. During the course of their careers they have developed individual habits and routines that help them manage their emotions and get their mind set.

7.3 Outcome

The theoretical part of the work came out versatile, meaning that the theory can be applied to practice for different sports quite easily, excluding some of the well-known athlete-specific examples. The versatility was caused by some of the material being about psychology in general and not focused on sports psychology, and very little of the material being specifically about coping mechanisms for ice hockey goaltenders. Regardless, the final product was meant to be geared towards providing aid for goalies in ice hockey and I think it was achieved. I feel that the majority of goaltenders can relate to the themes in the guidebook and find a thing or two useful in their daily training.

I gained a lot of insight about performance pressure and the sources of it during this process. Even though pressure is always generated from within the athlete, it is important to identify if there are outside factors that spark it. I'm glad that completing this work has strengthened my toolkit for mental coaching and I'm now able to discuss nervousness and take concrete action towards coping with it if that's what my goalies want to do. It has also inspired me to keep up with future studies regarding the topic.

Lastly, the feedback from Team Shutout Goalie School was positive. They saw the manual being usable and the theories and practical methods approachable. With that said, the line between us remains open, since they want to actually use the manual in practice to see its effect. The changes and/or additions to the manual will be made in the future, should the need for them arise.

8 Discussion

The purpose of this work was to provide information about the pressure athletes experience in competitive situations, and the methods commonly used to cope with it. From my personal point of view, knowing what to do when pressure hits is crucial in both every-day life and sports, because nervousness is so universal. Even introducing yourself to a room full of strangers can cause anxiety, let alone performing in a spotlight.

The theoretical part of the work covers coping mechanisms suitable for all sports. This theory is then fine-tuned to fit the needs of an ice hockey goaltender in the final product. As the last line of defense of a hockey team, a goalie has to be able to carry a lot of mental weight. A goalie is an individual athlete inside of a team sport, his/her actions can be constantly monitored since a goalie is usually on the ice for the entire 60 minutes of the game, and goalies' mistakes are very visible because they lead to an opponent scoring a goal. There is a lot of glory to be gained if a goalie plays well, but an entire team can also lose a game because of bad goaltending. A goalie needs to be physically strong, fast, agile and flexible in order to be successful. In the fast game of ice hockey where split-seconds make the difference, a goalie can't afford to let pressure clutter his/her vision, focus, or movement.

The final product is a manual for dealing with pressure and it is made for Team Shutout Goalie School. They operate in Ontario, Canada in the cities of Toronto and Brampton. They train close to 200 goalies every week. Some of the goalies they've trained have reached OHL or NCAA or have even been drafted to the NHL. During my work placement year in Toronto we agreed that a manual like this would be beneficial for Team Shutout and their goalies. The plan is to include the manual in their Advance Summer Camps and High Performer Programs.

Some areas of sport psychology were purposely left out of this work due to them not operating in the acute phase of stress management or stress prevention. Such areas are for example arousal levels and motivation. Mental training methods for teams were

also left out of the report. This is of course open for interpretation and the content of a report like this can be debated. I feel like arousal levels and the alteration of them works on slightly different emotions than stress management, even though both can be present before and during a competition. I see motivation as a separate issue from performance pressure because having high or low motivation doesn't necessarily eliminate nor heighten nervousness. Some connections could probably be drawn between arousal levels, motivation and coping with pressure, but more research would have been needed for that data to reach this report. Mental training for teams was left out solely because the report focuses on coping mechanisms of an individual athlete.

Mental training is a tricky subject because it is so difficult to prove to be effective. Scientific studies have been conducted in order to show its effects on athletes and regardless of the results it still remains a spiritual thing. I think belief plays a major role when participating in mental training. If an athlete doesn't believe there is something to be gained out of it or thinks it is stupid and waste of time, then surely the effects are none to minimal. An athlete cannot be forced into mental training because it takes commitment. In that sense it is similar to physical workout; do it haphazardly for lesser results. Athletes, as well as coaches, should keep an open mind when approaching mental training. It is surprising how little mental training is used compared to how important the "mind-games" are seen as in the world of sports. I'm sure the reason is a lack of knowledge and a lack of belief. Also just as big of a reason, if not bigger, has to be that mental training is different. It is not included in the traditional, old school training plans and one might be afraid of making a fool out of themselves for even bringing it up. This is why I'm glad that more and more elite-level athletes are shown performing imagery or other type of mental training routine, which is leading to young athletes doing similar things in their practices or games. Even if it is just mimicking their idols, maybe some of those things stick and grow into habits that actually strengthen their minds.

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