

# Reach your full potential with sport psychology

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**University of Zagreb Faculty of Kinesiology**

**Croatian Psychological Chamber**

**Croatian Psychological Association**

**4<sup>th</sup> International Sport Psychology Symposium**



**REACH YOUR FULL POTENTIAL WITH  
SPORT PSYCHOLOGY**

**Zagreb, June 26<sup>th</sup>, 2022**



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**PROCEEDINGS BOOK**

**Editor:**

**prof. Renata Barić, PhD**

**University of Zagreb Faculty of Kinesiology  
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# PLACEBO EFFECTS IN SPORTS PERFORMANCE

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*Eötvös Loránd University, Budapest*

## **Preamble**

The placebo and nocebo effects mirror the human mind's power to influence a future outcome. A while ago, Jean Baptist Girard claimed that “*by words, we learn thoughts and by thoughts, we learn life*.” Indeed, words are powerful and influence us consciously and subconsciously. Spoken or written words can please or hurt. They are a primary channel of thought manipulation. Then thoughts influence our feelings and actions, the whole human behavior. Indeed, Epictetus thought that things (themselves) do not affect us but rather the mental ideas (thoughts) we create about things.

Ten years ago, a German team published a review paper on the power of words used by doctors in communicating with their patients (Häuser et al., 2012). Based on their systematic analyses, the research team concluded that doctors should receive special education in communication complementing their medical training because their words are like a double-edged sword. They can heal, or they can kill.

I suppose most people are familiar with pain and inflammation-reducing pills like aspirin. Some may use it regularly. So do athletes, for various ailments and even for ergogenic aid. Like every medication, aspirin comes with a patient information leaflet listing all known potential side effects. Those who used aspirin in the past do not bother reading. They *know* that aspirin yields the desired result for them. This practice is an example of conditioning, a mental cause-and-effect association established through experience. On the other hand, those who read the information leaflet describing the side effects may decide not to use the medication. If they still use it, the probability of experiencing side effects increases (Colagiuri et al., 2012). Why? The answer relates to expectancy effects associated with the unknown (unexperienced) for which the individual has not developed a mental schema.

Indeed, Watson, the father of behaviorism, who Pavlov greatly influenced, claimed that all behaviors result from conditioning and the influence of past experiences. As such, Watson ignored the subjective mental schema, which is the unique mental neural network of the individual. However, this connection is essential because a *specific* stimulus (like an orange) can produce different responses in different people.

## Objectives

My symposium lecture has three objectives. The first is a brief overview of the placebo and nocebo effects. The second objective is the gist of the presentation and discusses the placebo and nocebo effects in sport and exercise, focusing on my research. Finally, the third objective is the Ethical consideration of using or not using placebo intervention in sports.

### A brief overview of the placebo effects

A placebo is an inert pill that should not have any systemic effect, as described in medicine (Finnis et al., 2010). Instead, the results of placebo administration stem from individuals' thoughts (or mental schemas) determined by experience and expectation. The term placebo comes from Latin, which translates as: 'I will please,' or 'I shall please'; Nocebo is the opposite: 'I will harm,' or 'I shall harm' (Jilch et al., 2020). The placebo and the nocebo can be an agent, event, or action. The placebo effect is pleasing, while the nocebo effect is harmful. In the medical dictionary, a placebo is defined as "an ineffective medicine but may help relieve a condition because the patient has faith in its powers." (Kellett, 2012).

This definition, in my view, is limited, but it contains two words that merit evaluation. These words "may help" and "faith." Faith reflects thought, belief, trust, or conviction. May help (in the context of faith) suggest that it is *conditional upon faith*. Very long ago, Hippocrates recognized that some patients got better because of their *faith* in their physician, even though their health condition was devastating (Potts, 2021). Some people may recall that once they felt unwell, they went to the doctor, and after a few minutes of consultation, they already felt better. If so, the doctor probably used the right word in relieving the agony. People see their doctors because they *believe* that the doctor could help.

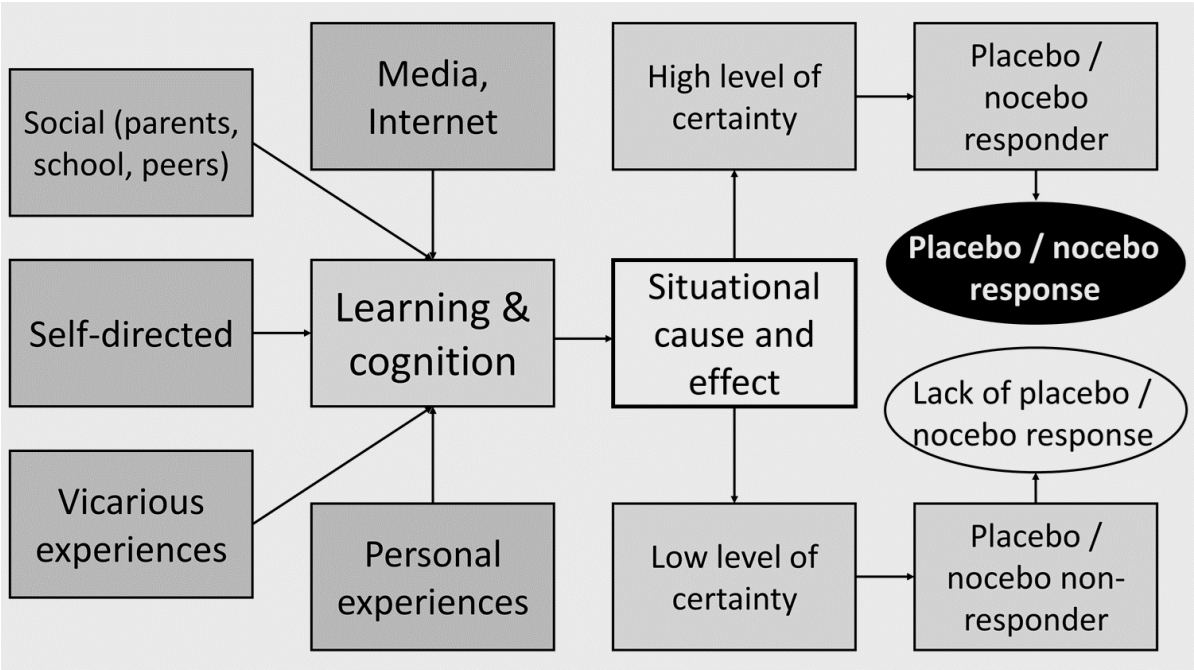
One's belief in the doctor's ability to help reflects a positive expectation. If the doctor helped successfully in the past, it is a *conditioned* expectation. If a person holds a negative expectation about the doctor's ability to help you, that person won't bother to go for a consultation. A bad experience with a particular doctor creates negative expectations and generates avoidance behavior; the person will likely seek the help of another doctor.

Expectations can be '*certain*' equivalent to a conviction or '*uncertain*' and can range anywhere between these two ends of the spectrum. Ploghaus et al. (2003) produced robust neuroimaging evidence for *certain* expectations activating different areas in the brain in contrast to *uncertain*

expectations. For a placebo effect to occur, one should hold certain expectations about the efficacy of the placebo agent.

Figure 1 below illustrates how the placebo/nocebo effect surfaces in one’s mind. The central point is the *situation* in the context of the placebo. The evaluation of the situation depends on the *unique* mental schemas of the individual. These schemas are conditioned - or created based on new information and related experiences - mental frameworks resulting from upbringing, formal and informal education, and vicarious and personal experiences. Nowadays, however, people’s schema is primarily affected by media information, especially the internet. So, the evaluation of the efficacy of the potential placebo could yield high- or low-level certainty expectations. But high-level expectations can be positive or negative and thus produce placebo or nocebo effects. If this happens, the person is called a responder (Tetreault et al., 2016). Being a responder or non-responder is determined by genetic, personality, and situational interactions. Thus, even predisposition does not make one a responder in all situations; however, like hypnotic susceptibility, some people are more predisposed to be placebo responders than others.

**Figure 1.** Diagrammatic illustration of the mechanism of placebo/nocebo effects.



A study used fMRI to detect the differences between placebo responders and non-responders to a placebo pain reliever. It showed a high level of brain activity in the mid-frontal gyrus in the placebo responders, absent in the non-responders (Tetreault et al., 2016). Another study published earlier (Rief et al., 2011) induced thermal pain in healthy subjects, then provided



them with a potent pain reliever under three conditions 1) no expectation under hidden treatment condition, 2) inducing positive expectation, and 3) inducing negative expectation. Subjects rated their level of pain on a 0 to 100 rating scale. Hidden analgesia decreased the perceived pain compared to baseline. Analgesia with positive expectations doubled the effect of the analgesic. However, analgesia accompanied by negative expectations canceled out the impact of the analgesic agent. The authors also showed that positive and negative expectations activated different areas in the brain. Earlier evidence suggests that expectations increase brain glucose metabolism by up to 50%, especially in the thalamus region associated with reward and conditioning (Volkow et al., 2003).

### **Placebo effects in sport and exercise**

In sports science, we can use randomized control trials (RCT) in which participants are allocated to active treatment and placebo and preferably a no-treatment control group. This intervention can be combined with a double-blind design in which neither the experimenter nor the subject is aware of group allocation. Alternately, a deceptive strategy can be used in which the participants think that they receive an active treatment but receive a placebo.

A coach can use concealed administration of placebos in applied sports settings, which is highly unethical. However, an open, active treatment is also possible. In this case, the coach offers an aspirin to the athletes, who know that they are receiving aspirin. Beedie and Foad (2009) wrote the first narrative review in the area based on 12 intervention studies, 11 of which took place after 2000. Accordingly, this research area in sports sciences is new. After reviewing the 12 studies, the authors concluded that the placebo effect is present in sports. Therefore, my colleague and I (Bérdi et al., 2011) have conducted a meta-analysis to examine the magnitude of the placebo effects disclosed by Beedie and Foad (2009). This first meta-analysis in the area included 14 studies encompassing 196 participants. The placebos were caffeine, oxygenated water, carbohydrates, and amino acids. The measures were physiological- or performance-related (e.g. muscle power, heart rate, running speed) and psychological attributes (perceived exertion, post-experiment self-evaluation of performance). The effect sizes varied from very low to very high, with an unweighted mean effect size of 0.40 and a variance weighted effect size of 0.31, which according to Cohen, reflects a low to medium effect. So, our meta-analysis confirmed Beedie and Foad's (2009) conclusions and showed placebo *interventions* produce a small to medium effect on physiological, performance, and psychological measures.

However, the reviewed studies included both responders and non-responders. Thus, what is the logical conclusion? The possible presence of non-responders dampens the results. Hence, we can safely posit that the effects sizes would be more significant in placebo responders (or when eliminating non-responders). These results prompted me (Szabo, 2013) to think about the psychological effects of a single bout of exercise, which are almost exclusively positive. Many models exist for the immediate positive psychological changes after a single bout of exercise (Szabo & Demetrovics, 2022). They can be physiological, such as the thermogenic hypothesis, the sympathetic arousal hypothesis, the beta-endorphin hypothesis, etc. Alternately there are psychological models such as the distraction hypothesis or cognitive appraisal hypothesis. Still, none of these can fully explain the acute psychological effects of exercise. So, I thought something was missing (Szabo, 2013); the expectancy-based *placebo effect*.

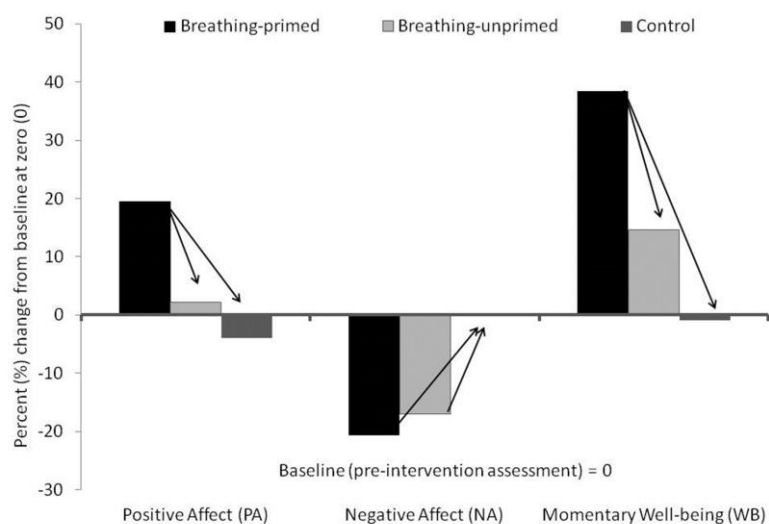
There is a logical argument for this hypothesis. First, there are physiological effects that produce a pleasant feeling. Second, regular exercisers get hooked (conditioned) to this feeling. Third, over time, they anticipate these feelings in response to their exercise. Finally, the expectancy is *certain* because of prior conditioning. Therefore, a placebo (or at least a partial placebo) effect is likely to occur. Substantiating this conjecture, Lindheimer et al. (2015) performed a meta-analysis on nine studies that used a randomized training protocol. Their results indicated that the mean placebo effect size was 0.20, and the observed effect of exercise training was 0.37. So, they concluded that the placebo effect accounts for approximately half of the psychological benefits of exercise training.

Bérđi et al.'s meta-analyses included less than 200 participants in 14 studies. Hurst et al. (2020) have located 31 studies with over 1500 participants in a more recent meta-analytic review. Ergogenic aids were classified into 1) nutritional and pharmacological, 2) mechanical, and 3) psychological categories. The effect size for nutritional and pharmacological placebos was 0.32; for mechanical placebos, it was 0.37; and for psychological placebos, it was 0.87. The pooled effect size revealed a small to moderate effect size of 0.35 across all studies, comparable to the effect size we found in the earlier (Bérđi et al., 2011) meta-analysis. Again, these studies included both placebo responders and non-responders. Because the latter group could have diluted the effect sizes, the actual effects within the placebo responders may be more significant.

Hurst et al. (2020) showed that the most significant effect occurs for psychological placebos. Indeed, psychological placebos, such as information-priming, may be effective. For example, in a thought-manipulation study (Szabo & Kocsis, 2017), my student and I examined the effects

of expectancy priming on the psychological effects of deep breathing lasting for only 3 minutes. Sport science students were randomized into three groups. Two groups performed 3 minutes of deep breathing before their regular lecture. Deep breathing consisted of inhaling slowly over 6 seconds, holding their breath for 6 seconds, and exhaling slowly over 6 seconds. The difference between the two groups was that one received *misleading information* that 3-minutes of these practices trigger similar mental results to a 30-minute intensive aerobic exercise. The other group performed the activity as a warm-up for the class but received no information. Finally, a control group simply sat quietly for 3 minutes. All the three groups completed the positive affect negative affect schedule (PANAS) and a single item momentary well-being feeling scale before and after the 3 minutes of deep breathing and the control condition. The results revealed that the expectancy-primed group increased statistically significantly in all measurements (Figure 2) compared to the control group. Furthermore, their scores were different from the non-primed group in positive affect and feeling states but not in negative affect, which decreased by about 20% in both breathing groups. The non-primed group only differed from the control group in negative affect; even though they showed an overall 15% increase in well-being, this rise was statistically not different from the control group. Still, it was statistically significant from the baseline. So, we have concluded that information priming significantly augmented the effect of deep breathing by eliciting a placebo effect.

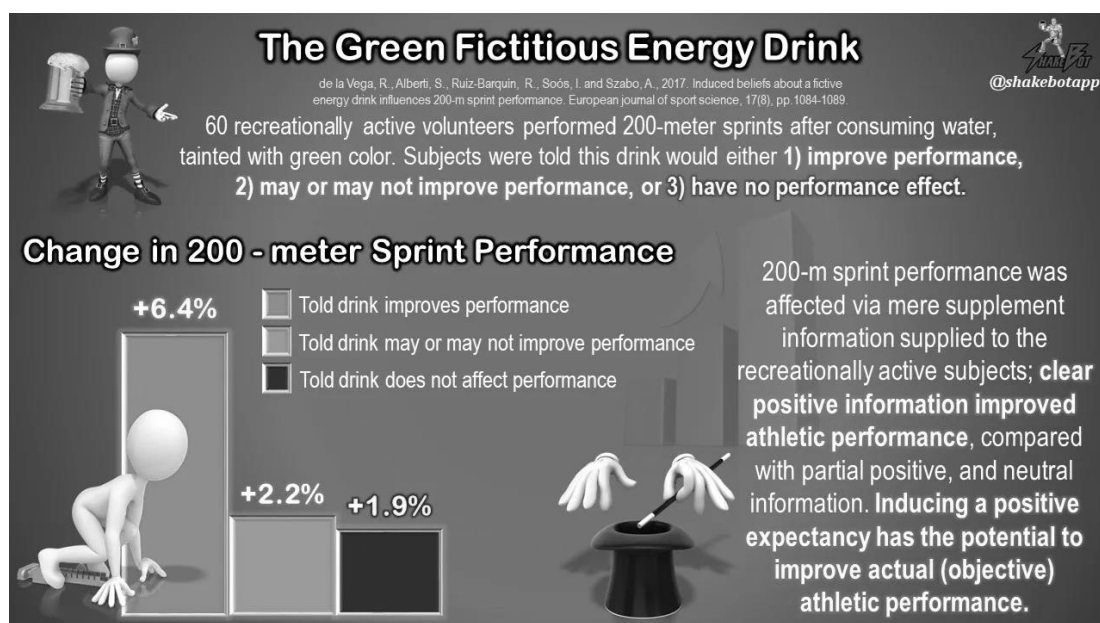
**Figure 2.** Differences between groups in three measures (Szabo & Kocsis, 2017).



In another study (de la Vega et al., 2017), we used a psychological placebo associated with a fictive green energy drink and tested its effects on 200m running sprint performance. Initially,

60 long-distance runners were timed for their best run on a 200m sprint. One week later, they were randomly assigned to three groups. The first group received *no specific instruction* and was told that the energy drink may or may not increase performance. The second group was told that the energy drink was laboratory tested *to increase* performance. Finally, the third group was told that the energy drink *has no effect* on performance, but its taste is good. After drinking the fictive energy drink that was only green-colored water, participants performed a gentle warm-up and reran a 200m sprint. The experimenter who timed the sprint time was blind to the condition to which a given participant was assigned. The result replicated our previous work (Szabo & Kocsis, 2017). A group-by-time interaction revealed that the positive instruction group had the most improvement in the 200m sprint time. The 6.4% *average* decrease (Figure 3) compared to baseline was statistically significant. Although the neutral instruction group also showed about 2% decrease, this change was not statistically significant after correcting the alpha level ( $0.5 / 3 = 0.016$ ). The slightly faster times (about 2%) in the neutral and negative instruction group - in my view- could merely reflect a *habituation* effect; the additional decrease in the positive information, however, could be linked to the information provided to the runners. So, these studies show how *words* can affect human feelings and exercise performance.

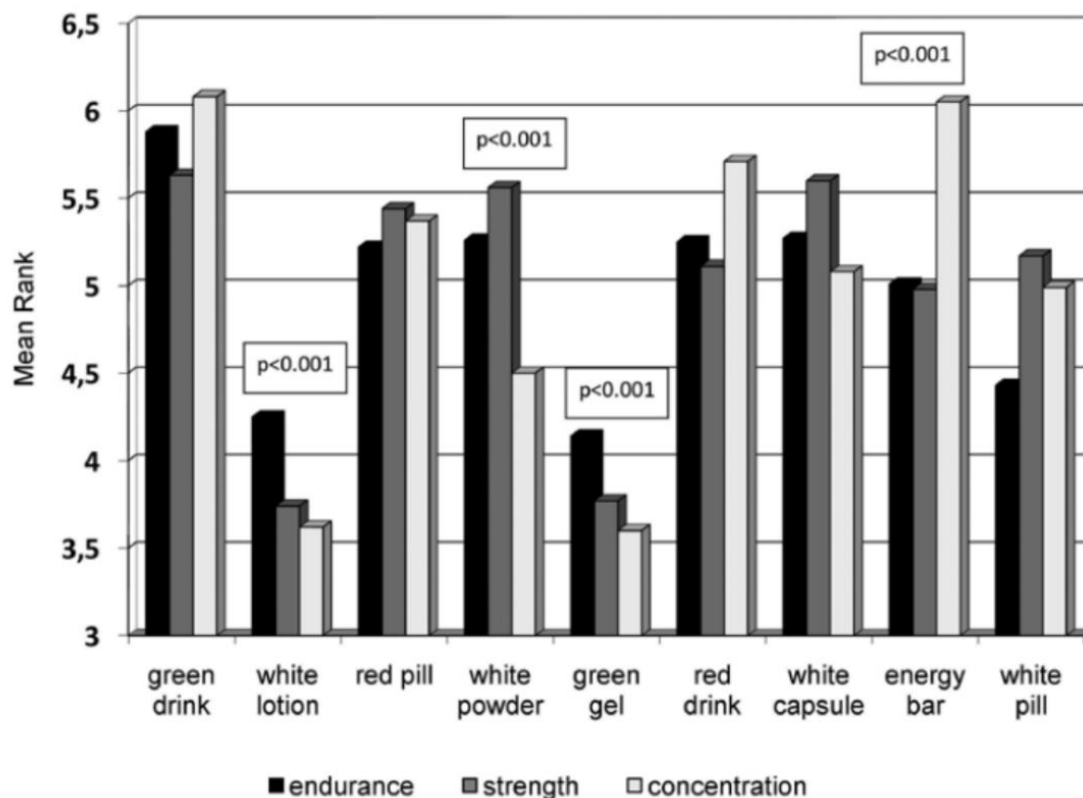
**Figure 3.** Decreases in 200m sprint time in three groups receiving different information associated with a fictive energy drink (de la Vega et al., 2017).



Source: <https://adamvirgile.com/2018/04/20/this-green-drink-makes-you-run-faster/>

One may ask me why you chose a *green drink* in the above study and not a red liquid, a white or red tablet instead? The answer is that in one earlier work, we found that green drink was rated as the most efficient (placebo) in strength, endurance, and concentration (Szabo et al., 2013). This study presented nearly 300 undergraduates with unlabelled images of nine fictive ergogenic aids: green drink, green gel red drink, white powder, white lotion, energy bar, red pill, white pill, and white capsule. Their task was to rank them separately (three times) in order of expected efficacy for *endurance*, *strength*, and *concentration* while simply thinking about the *perceptual* characteristic of the presented agents and not trying to associate them with any commercially available products. Results revealed that the green drink was perceived as the most influential on all three performance indices (Figure 4). This finding justifies our choice for the placebo in the 200m sprint study and shows that people's expectancy varies with the potential placebo agent's form, shape, and color. This finding has implications for the placebo agent's physical appearance. For example, two identical experiments could yield different results if the placebo differs only in shape or color (see green and red drink in Figure 4).

**Figure 4.** Perceived efficacy of various agents based on shape and color (Szabo et al., 2013).



Knowing from literature and our work that placebo could influence athletic performance, we studied 79 elite athletes' attitudes toward placebo use in sports (Bérdis et al., 2015). The first question asked participants if they had experienced a placebo effect in the past (please note that a placebo was defined/described before delivering the survey). Nearly half (i.e., 47%) of the respondents answered *yes*. The second question was whether they think that placebos could affect their performance, and 82% answered *yes*. Then, they indicated the extent to which they believed that placebos could be used more widely in sports. The answers to this question were related to previous experiences. Those who have already experienced a placebo effect scored statistically significantly higher than those who did not have such an experience. This tendency in the answers mirrors the effects of conditioning. The results also revealed that most athletes would accept conditionally (and about 10% unconditionally) a performance enhancer from their coach. Additionally, less than 10% of the elite athletes would feel unhappy about the deception. Finally, about two-thirds of the athletes would be happy to be deceived as long as the placebo intervention served their objectives. Consequently, we concluded that there appears to be a green light for the 'green drinks' in elite sports.

In a later study (Szabo and Müller, 2016), we replicated the previous survey with 93 coaches working at regional, national, and international levels. Again, the first question was whether they experienced a false expectation or belief influencing an athlete's performance? Over 90% of the coaches responded *yes*. The second question asked whether they have provided a placebo to their athletes with the message that it would enhance performance? About 44% of the coaches answered *yes* to this question. Among those who responded *yes*, 93% said that their action improved the athlete's performance, and only 7% observed no change, but *none reported worsened performance*. Similar to athletes, coaches who experienced positive results with placebo administrations scored higher on the question about the broader use of placebos in sport than coaches who did not use a placebo in the past. Further, when asked what they think about the athletes' reaction if they would offer them a new performance-enhancing agent or intervention, their responses almost mirrored those of athletes. For example, 12.5% believed that athletes would accept the agent unconditionally, over 75% conditionally, and only about 10% would not accept it under any condition. Finally, the replies to the last question concerning repeated use after *successful* placebo intervention were mixed. Only 14% of the coaches would repeat the placebo intervention without telling the athletes, 43.5% would repeat it but inform the athletes, 23.5% would not repeat it but inform the athletes about the deception, and, finally, 19% would not inform the athletes and would not repeat the intervention.

Placebo effects also drive superstition in sports (Dömötör et al.2016). A superstition is a form of self-administered placebo. Elite athletes are the most superstitious. The superstitious ritual helps athletes' confidence and guards against the potential negative thoughts associated with not performing the superstitious routine and its consequences. It often sets the stage by helping the athlete feel relaxed, confident, and focused on the upcoming performance. Our review concluded that the mental benefits of superstitious behavior in sports are derived from the placebo effects. Conversely, not performing the mentally conditioned ritual could make the athlete feel uneasy and anxious and thus evoke a nocebo effect on performance. The most recent systematic literature review that we published (Horváth et al., 2021) found that 10 out of 12 studies using a between-subjects intervention have reported a nocebo effect. The mean effect size was 0.60, suggesting a medium-to-large effect of nocebo intervention on motor performance. Seemingly, nocebo effects are more potent than placebo effects and should be avoided with conscious (planned) protective interventions, like coach-athlete and athlete-athlete communication, supporters' and media reaction, feedback, or poor performance criticism.

### **Ethical consideration (food for thought)**

In their first review, Beedie and Foad (2009) posed a valid question: "*... could the placebo response be used to enhance performance in competition, and if so, would it be ethically acceptable to do so?*" Of course, there is no problem if the placebo is self-administered like a superstitious ritual or presented to the athlete openly/honestly as a placebo. However, based on current ethical standards and regulations, there is a problem when there is deception. But deception is not always harmful. Let me illustrate this point with two examples. In the first (Figure 5/A), a doctor shares bad news with a patient concerning her health. The doctor tells her the truth. But the patient's mental framework, or schema network, is running the mental program, which concludes that she will die since her disease is associated with death in her mind. The mind's conclusion is then a subjective verdict. Who knows? She may eventually die.

In the second example, a coach gives a super placebo pill to an athlete suffering from knee pain (Figure 5/B) with the message that it will help the athlete's performance, perhaps by relieving the pain. The athlete is deceived, but the placebo works (or it may work), and the athlete could finish the game. The mental response to swallowing the pill is the *activation of pain regulatory pathways*, as shown earlier by Rief et al. (2011), which then alleviates discomfort and permits the continuation of the play. Knee pain has been resolved through sham surgery too (Sihvonen et al., 2013); therefore, placebo effects in knee pain regulation appear to be supported.

In the first scenario, the truth can harm, which may induce further damage. In the second scenario, deception may heal or inspire. So, one should stop and think for a moment and introspectively examine the personal attitude concerning a *goal-serving* deception and noxious or *harm-inducing* truth. In doing so, one should ask why a child is receiving a vaccine comforted with deceptive words like it won't hurt, or you will feel a small peck only for a moment?

I challenge those ethical views, rules, or regulations that have the potential to harm. In addition to the philosophical principle '*first do not harm,*' ethical regulations should consider: 1) the will, 2) the well-being, 3) the comfort, 4) the experience(s), and 5) the goal or objective(s) of the individual. We know that coaches often use placebos in sports, which most often include deception. But apparently, most athletes *do not mind* that because the coach manifests a good intention in helping the athlete. Placebo administration, whether internal or external, resorts to the *power of the mind* to modify one's thoughts which could favorably influence performance. Coaches shall never induce a nocebo effect and, like doctors, must be careful with their words when communicating with their athletes to avoid causing an unwanted nocebo effect.

**Figure 5.** *Ethical questions as illustrations in placebo administration.*



(A) *Negative, disappointing, scary words.*



(B) *Positive, encouraging, comforting words.*



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# MINDFULNESS AND HIGH PERFORMANCE

Adam Kocian, mental performance coach

*Hungry athlete*

## **Abstract**

Throughout his career, every sport psychologist or mental coach develops his own approach and philosophy to help athletes mentally succeed. This includes topics like motivation, confidence, mental toughness, relaxation/activation and many more. Most professionals who work with athletes still use techniques that focus on method from the CBT (Cognitive-behavioral therapy). This method helps clients to change dysfunctional patterns of thought-emotion-behavior interactions into more functional ones (Henriksen & Hansen, 2020). In the past three decades we have seen exponential increase in studies focusing on mindfulness and performance. Additionally, there is growing popularity among practitioners to integrate the concept of mindfulness into their approach. This third psychology wave is coupled with the idea of acceptance (concepts like Acceptance and Commitment Therapy) and argues that the need to control thoughts and emotions is not part of the solution. Instead the client is led to accept all inner experiences, focus on the present moment and commit to behaviours, that are in line with his/her values (Hayes & Strosahl, 2004). In this presentation I will discuss the definition, mechanisms and application of the mindfulness concept from my work with young athletes. Furthermore, I want to share my everyday experiences with young and motivated individuals. The main goal is to increase their mindfulness or non-judgemental present moment awareness. Another aspect is the acceptance of internal and external stimuli, that could steal their attention from their performance. This concept is especially effective in these modern times, where an athlete is pictured as a mentally strong person, always confident and focused. With mindfulness young athletes are led to find out their own values and act upon them even in difficult situations. The goal is to face difficult emotions or thoughts, which are explained as normal experiences in every athlete's life and afterwards focus on the task at hand. This approach will help athletes to be in control of their attention, which will increase their ability to focus in any environment they perform in (Henriksen & Hansen, 2016).

**Keywords:** mindfulness, acceptance, sportpsychology

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# **THE MONSTER OF FAILURE AND HOW TO TRICK IT**

## **A CASE STUDY: UNDERSTANDING AND OVERCOMING ANXIETIES**

Mag. rer. nat. Heike Torggler, sport psychologist

I was ten years old when I first started competing in orienteering events. It was fun, I figured out quickly how to read the map and find my way through the forest. I loved both running and adventure so orienteering was the perfect match. Sure, sometimes I got badly lost as a child. I still have this picture in my mind of sitting on a rock in the middle of nowhere crying, having no idea where to go. Luckily there were always other runners around to bail me out. Apart from when I was lost in the middle of nowhere, I fully enjoyed what I was doing. Unfortunately for me though, I won almost every race in Italy in my age class. Spoiled ‘winning’ kids are not always good losers. It became more about competing to win, than just doing it for the fun. Eventually some taller, faster and smarter girls joined our club; and as a natural consequence ‘winning’ Heike fell from her throne. I found myself standing at the start line being afraid to fail and coming last... (not lost!). Once you have the failing monster in your mind, you become so busy fighting against it, that you can hardly focus on anything else. Orienteering is a sport that, as with most other sports, doesn’t allow distraction. Staying mentally focused on the process is part of the game and often the big challenge. As teenager I started realizing that the monster of failure had caught me and that I had to find a way to trick it. That’s when I found a book written by Prof. Roland Seiler and my interest in sport psychology was born. Prof. Seiler was a Swiss orienteer and pioneer in sport psychology. He focused much of his initial work and research on mental processes in orienteering. These same topics eventually became my passion and profession.

In my work coaching athletes across all ages and different kinds of sports I’m often impressed with how many different faces the monster of failure can have. In my presentation today I would like to share an athlete story and my experience of working with her. As sport psychologists we might often feel pride when ‘our’ athletes win medals and titles, reaching their fullest potential. However, for me, it is athlete physical and mental wellbeing that is the most important goal and outcome of my role. This means sometimes helping an athlete to quit their sport, even if they are talented and everyone around them has high expectations of their success. So today I will not be talking about the most successful athlete in terms of results, but about an athlete who struggled a great deal with the anxiety of failing, and whose success was best measured by her ultimate wellbeing.

Last autumn I was approached by a senior biathlon athlete. She was about to end her sporting career because of her age and because she had lost her place in the national team after some poor performances the previous winter. At the same time she felt that her time wasn't over yet, especially because she believed she had not yet reached her full potential. This was both frustrating, and motivating. We started working together and I soon found out that after badly 'failing' as last leg runner in the Olympic relay event, she had developed a failing anxiety around letting the team down again. The reactions of the team manager and media had been, as you can imagine, devastating. She described feeling traumatized in the period that followed. Coaching her involved much more than goal setting for the new season, focusing on her progression, improving her training conditions and cooperating with her new coach – it largely involved helping her to recover from those past experiences and overcoming the ever-present monster of failure. At the beginning the anxiety was appearing nearly every session and it was clear that we needed to have a closer look at what was going on.

Over the previous few years I had been specializing in trauma pedagogy and somatic experiencing, which gave me some very effective tools for treating trauma and also for helping injured athletes during their recovery work. I had been searching for a more body-oriented approach to providing care, and I have now found one that suits both me personally, and my way of counselling. Somatic experiencing (SE) is a specific approach developed by Dr. Peter Levine and is based on the theory that traumatic experiences can lead to dysfunction in our nervous system. This dysfunction can keep us from fully recovering from highly stressful experiences and can lead to states of high activation, dissociation or anxiety in similar situations. The goal of SE is not only to facilitate understanding traumatic episodes on a cognitive level, but to help integrate emotions with bodily sensations. This can improve self-regulation and helps people recovering from trauma with managing distressing sensations. A key element is the mindful awareness of thoughts, images, emotions and body sensations in the actual moment they are happening.

Coming back to my athlete, the idea of competing again and fighting for a place in the national team was enough of a trigger to release a whole range of emotions such as anxiety, shame and self-hate. She described what she was feeling in her body, like tightness in her stomach, and fingers starting to shake - she even drew a picture of the 'monster of failure'. Together we found a way to tame that monster by approaching it with curiosity and keeping in contact with resources, while also using grounding techniques. She found this very useful and we continued using SE also in our online sessions when she was travelling. Once able to face her anxieties,

she started to look forward competing again. She won the Italian Championships and earned a start place in some world cup races. She exceeded everyone's expectations and qualified for the Olympic Games.

When she called me the first time from Beijing, she mentioned that she felt very tired. Nevertheless, she continued training and was not allowing herself to slow down. I could sense that she was pushing herself too much and wasn't able to adequately rest and recover. For the first few days our online connection was frustratingly poor. We could only exchange brief messages before her individual races. I have to admit I was quite relaxed because I was confident she had learned and practiced everything she needed to do and was well prepared – she was in a good place with her self-regulation techniques. However, as the individual races didn't go as well as she had expected, she started doubting her shooting technique again and her anxiety level rose. I realized that we had more work to do before she went into the relay. Fortunately, there we had some time. At this point, when she was thinking about competing in the relay her stomach started cramping and she would be on the verge of vomiting. We did exactly what we had done before, but she also needed someone there beside her, to observe her emotions. Only when she had 'surfed' all those big monster 'failure' waves of memories coming back from the past was she able to relax and focus on her preparation. We had often used a mental picture of her as a panther, fully focused and ready to pounce, when she arrived at the shooting range, which helped her to achieve an optimal performance state. On the day of the relay, she was once again the final runner, but she felt confident, relaxed and was able to perform very well, giving her best. It wasn't enough for a medal at that time, but the medal came just two weeks later in a world cup, after she had physically and mentally recovered from the Olympic games. Back home she described a huge sense of relief and happiness - you could sense just how great the pressure had been.

That was the story, but what were the methods behind it? I have learned the basic knowledge and structure of these sessions. But as I have become more experienced, the less I need to make plans and think about methods and programs. During the counselling now I mostly 'go with the flow', see where the athlete is, and go where he or she wants to go. However, looking back over this case, our main focus and work included very specific topics and methods.

### **Analysis of motivation, potential, goals:**

After going through all those difficult years I wondered what had kept her going. Why was it worth investing so much time, energy and focus into this sport, when she could have chosen

a new path. So firstly, we talked about the fun and challenging parts of practicing biathlon at a professional level. I wanted to know what her life would be like when she decided to leave the sports career behind her. It turned out that there was definitely still something ‘burning’ inside her. She had moved locations and had already found a new coach, whom she trusted. Her partner, who was living in France, fully supported her to continue. She also badly wanted to get over her anxiety in order to and see what was possible. For her, it was most important to “give her best, using all her potential” physically, technically, tactically, and mentally. After this brainstorming we prepared a scale including all those key elements of a good performance. Using these scales, she reflected on some training sessions and competitions where she did well and identified areas she still needed to improve.

### **Monitoring of success and progress:**

We prepared a schedule, where she would write down every day her progress and what she felt were the most successful moments. There was also the daily question about what still needed to be improved or developed. Nutrition, regeneration, mind-set, shooting technique, and relaxation were all identified. We worked, for example, on the pre-shoot routine. It was all about thinking less, while feeling the right amount of tension in her body. As I mentioned before she used a black panther as a mental image: fully focused and ready to attack. After a while this mental picture worked well to get her in a good ‘shooting state’. With her coach she refined her shooting technique under various conditions.

### **Biofeedback and somatic experiences:**

She learnt a variety of strategies to calm her nerves before competitions. We combined SE with biofeedback and she was impressed at how quickly she could self-regulate and relax even when stressful thoughts appeared. We used SE to face the monster of failure, and she became very good at ‘surfing’ her unpleasant emotions. A crucial moment was when she realized that the worst thing that could happen after a messed-up race were the feelings of self-hate and worthlessness. That’s actually what she feared the most, especially the devastating and very physical inner tension that came with it. Once we had faced the monster, it lost its power. We worked through a range of different challenges in the same way. For example, there was the voice of one speaker that triggered some feelings of anxiety, and a team manager that she disliked. Confronting her with these exact situations, observing together her thoughts, emotions and body sensations, enabled us to find suitable creative, and sometimes humorous, ways to self-regulate. We actually laughed together a lot.



### **Having a plan and routine:**

It was the evening before her first world cup race in a long time and she told me that she was hoping that the race would go well. I was puzzled and said: “Oh no... hoping is not enough! What’s your plan?”. She worked out a precise plan for the next day and we went through it together. She felt much more secure after that and was rewarded with a very good performance. After that experience she started writing down her plan before every race and tried hard to stick to it. Of course, she still needed mental flexibility, because often unexpected situations would pop up. This wasn’t too much of a problem for her, as being flexible was one of her strengths.

### **Prepare for the biggest challenge:**

We knew that she would be the final runner in the Olympic relay and that she was not as physically strong as the athletes from the other countries competing in the final leg. My view was that she was physically very strong but tended to overtrain. In Beijing the cold, the waiting and the training between the events had somewhat worn her out. However, during the mental preparation before the relay, I let her visualize some scenarios, and we focused then on the most challenging. She imagined her team members racing at the front of the field and handing over to her in medal contention. In the end that’s exactly what happened and she was well prepared.

Unfortunately I didn’t prepare her for what came after. She was not prepared for spectators and media to see losing two positions as another failure. Fortunately, this time she wasn’t traumatised because she knew that she had handled the pressure well and had given everything she could.

### **Thinking beyond:**

Her self-esteem was initially based very much on her success in sports. If you were to meet her, you would see immediately that she is a warm-hearted and intelligent young woman. It was important for me to also help her to learn that she was much more than an athlete or a number in the team. Finding out about her other qualities and visualizing specific situations where she could express those qualities was also very useful for her. I observed that she became more easy-going about the sport over time (this may partly be due to the way sport psychologists see and value the human in all our interactions with athletes). In my experience it’s not enough to just know your own qualities as a cognitive idea or as feedback from someone else. You need to feel them inside yourself. Thinking beyond was not only important for growing her self-esteem, but also for facing the Olympic games. When she was preparing for the relay I noticed

that all her focus and energy went into this single event. I asked her to think further. I wanted to know what she was looking forward to, independently of how the race went. She thought about it for a while, then I heard her smiling at the phone saying: “I’m really looking forward to playing with my cat when I’m back home... and baking a cake... and the cat doesn’t care a single bit about how I perform.” After that I noticed an attention shift and she was laughing more again.

In summary, there were some interventions from my side, but a lot of the success was because of the efforts she put in. For me it was a real pleasure to follow her comeback.

I asked Federica for her permission to tell her story here. She was happy and sent me a message about her last season competing in biathlon:

“My goal for the past season was to qualify for international competition again, but also to find FUN and TRUST! Due to being honest with myself, having the will to go forward, having psychological support and practicing the techniques, I found a new and better way of viewing the old traumatic experiences and felt free-minded again. And by-the-way Heike, I have decided to continue, when shall we start the mental prep?”

Now it’s me having to trust that she will find the right moment to conclude her career as a professional athlete and jump into a new life. But for now she still seems to be having fun training, travelling, competing and tricking those failure monsters.

# STRESS RECOVERY PROGRAM AS AN IMPORTANT FACTOR ON THE WAY TO REALIZING THE FULL POTENTIAL OF ATHLETES

Prof. dr. Mariana Tišma  
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## **Overtraining**

Competitive athletes routinely push themselves to the limit of their physical abilities. If there is an adequate balance between stress and recovery, the athlete will achieve continuous high-level performance. This positive overtraining can be considered a natural process when the end result is adaptation and improved performance: the principle of supercompensation - which includes the process of breakdown (training) followed by the process of recovery (rest) - is well known in sports. However, negative overtraining can occur, causing maladaptation and other negative consequences such as negative overtraining or stagnation. Overtraining states are characterized by an imbalance between workouts, as well as non-workout stress and recovery. Maladaptive conditions can manifest with a wide range of clinically significant symptoms such as fatigue, musculoskeletal pain and pain, loss of motivation, insomnia and / or other physical or mental symptoms. Subjective feelings of fatigue are likely to accompany the inadequacy of resistance training.

An athlete who fails to recover within 72 hours is probably negatively overtrained and is in an overloaded state (short-term effect). The long-term effect (stagnation) is the result of more severe overtraining, at the other end of this continuum (Kentta and Hassmen, 1998)

The main difference between the 2 related syndromes, according to (Raglin, 1993) is that loss of motivation (and withdrawal in severe cases) is a central feature of burnout, but not getting up. An ascending athlete can still be highly motivated to continue training and can even increase the training load to compensate for the reduction in performance. It is therefore important to consider them separately.

Budgett (1994). defines overtraining syndrome as a state of fatigue and poor performance, mainly associated with frequent infections and depression that occurs after strenuous training and competition. It is diagnosed if the symptoms do not disappear after two weeks of adequate rest, and there is no identified medical reason for that. This syndrome differs from the definition of chronic fatigue syndrome for which, in order to be diagnosed, the symptoms must last for at least six months. On the other hand, burnout is a complex set of different components.

Emotional exhaustion, depersonalization associated with a decrease in the sense of personal achievement are the most significant phenomena that will start the whole process. A significant cause of burnout is the loss of resources. According to Hobfoll's theory of resource conservation, burnout syndrome is defined as a process of consumption, loss and exhaustion that develops gradually during the time. This happens when there is no renewal of resources in the form of cognitive, emotional and physical abilities.

Lehman et al. (1993) suggested yet another definition staleness syndrome is an imbalance between training and recovery, exercise and exercise capacity, stress and stress tolerance. Stress is the sum of training and nontraining stress factors. By this definition, different types of stress contribute to the total level of stress which may provoke, and result in, staleness. The different stressors that may contribute to the staleness syndrome include psychological, social and physiological training stressors.

### **Source of overtraining**

All athletes have to train hard to prove themselves. Initially, difficult training causes poorer performance, however if recovery is adequate there is supercompensation and performance improvement. The training is designed according to cycles that include periods of recovery and periods in which athletes are overloaded. (Morton, 1997).

However, some athletes experience poorer recovery as a result of excessively prolonged and / or strenuous training regimens, stressful competition, or stress in general. This leads to prolonged fatigue and poorer performance. Unfortunately, the usual reaction of athletes and coaches to poor performance is more often intensified training than rest (Smith et al. 2002).

Exaggeration is one of the most common etiological factors that lead to injuries in athletes in children and adolescents. It can also lead to burnout, which can have a detrimental effect on the child. One of the factors that contribute to the occurrence of overtraining can be the constant pressure of parents on the child to compete and achieve a top result in the competition. (Brenner, 2007)

Lazarus (2000) considers that the experience of stress is a subjective category that arises as a result of primary and secondary assessment. The primary assessment determines the significance of the event. An event can be assessed as a positive, neutral or negative experience, according to the consequences it leads to secondary assesses one's own ability to overcome stress, ie the amount of potential needed to overcome a stressful situation.

The pilot research conducted by Tišma (2009) on a sample of 20 water polo players of the junior national team of Serbia aged 15 to 18 speaks of the connection between personality traits and overtraining. The results suggest that increased levels of stress, and thus overtraining, are more likely to occur in athletes who have more pronounced cognitive anxiety, who are more emotionally labile, and who perceive their relationship with others more negatively. Also, that athletes who have a high motive for achievement, who enjoy training and competition, have more pronounced internal motivation and who accept themselves as they are, are more resistant to pressure from coaches and the training process and therefore less prone to overtraining.

### **Symptoms of overtraining**

Fry et al. (1991) defined 4 major categories of symptoms associated with the staleness syndrome, namely: • physiological symptoms • psychological symptoms • biochemical symptoms • immunological symptoms.

When a person is exposed to stressors on a daily basis, the body is consumed under the constant action of stress hormones because there is not enough time to recover. As a result, the work of the digestive system is endangered, which can cause nausea. Headaches are becoming more common. The degree of concentration decreases. The immune system is weak and thus the body becomes more susceptible to infections, diseases, and injuries. Such people become irresistible to frustration, easily get annoyed and give up, they do not like the company of other people. They have constant insomnia and frequent mood swings. (Gregson & Graves, 2000) Athletes complain most about poor performance. They will often ignore fatigue, pain and heaviness in the muscles, depression until they begin to chronically affect the quality of performance.

Dyment (1993) The problem with sleep occurs in 90% of cases, they often have problems with falling asleep, nightmares, waking up during the night and waking up when they feel more tired than they were (Koutedakis et al. 1990). There may be loss of appetite, weight change, loss of interest in competition and sexual relations, withdrawal from the social environment, increased emotional lability, as well as anxiety and irritability. They complain of an increased pulse at rest and increased sweating. There are more frequent infections of the upper respiratory tract, which return in a slightly weaker form every time the athlete tries to return to the training process before he has fully recovered.

## Recovery

When psychodiagnostics (stress level, csai-2, msp, epk) determines that the athlete is burnt out by stress, a stress recovery program is proposed.

The recovery program includes six weeks of psychological treatment and twelve meetings.

During the first two weeks, the athlete learns relaxation exercises and talks to a psychologist about the causes and symptoms of stress. In that way, the athlete better understands what is happening to him, which is why he has a weaker performance and loss of motivation for the sport he is playing. Athletes are advised to avoid competitions during the first two weeks, and to try to train with about 50% of their potential in training. In this way, the occurrence of additional stress is avoided, and the development of internal motivation is encouraged. It takes two weeks to start recovery, and after that period, the athlete feels the first improvement.

In the next four weeks, we work with the athlete on concentration, self-confidence, and motivation. Social relations between athlete-coach, athlete-teammate, athlete-parent, and other important people from the environment are analyzed. Emotions such as anger, fear, anxiety, frustration, sadness, pleasure and others are analyzed in order for the athlete to better understand them and for them to work for him, and not against him at the moment of achievement. Through many different exercises, the improvement of concentration in athletes is encouraged. Victories and defeats are analysed, and important lessons are learned that lead to improved performance and the development of psychological resources for overcoming various stressful situations.

From an athlete who wanted to leave the sport, in six weeks we get an athlete who is ready for new challenges and new victories. From someone who felt powerless due to trying harder and achieving worse results, we get someone who knows how to recognize and overcomes a stressful situation and gets the most out of it.

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# **“TAKE CARE OF YOUR COACH”**

## **Erasmus+ sport Project**

Duration of the project: 24 months (1<sup>st</sup> January 2021- 31<sup>st</sup> December 2022)

Dubravka Martinović, univ. dipl. psih., sport psychologist

Take Care of Your Coach (#TCYC) is a Small collaborative partnership formed for an Erasmus+ sport project for a duration of 2 years. The Project presents a partnership between four clubs (sports organisations) from four different countries and four different sports.

The coordinator of the Project is Športno društvo “Riba”, a swimming club and sports association from Ljubljana (Slovenia), with other three partners: Odbojkaški klub “Umag”, a volleyball club from Umag (Croatia), Canoa club Napoli, a canoe club from Bacoli (Italy), and “Wintersportverein Kirchdorf”, a Ski club from Kirchdorf in Tirol (Austria).

### **Objectives**

The main goals of this project are to promote mental health awareness in a coaching profession and teach coaches to effectively deal with stress. Four sports psychology experts have designed the program that includes different psychological methods and techniques which will help coaches in that process.

Coaches (and others involved in the sports environment) should be able to recognise the warning signals of burnout (such as mental and physical fatigue and tiredness, feeling discouraged and losing passion for their sport) and prevent their rise as early as possible.

As mentioned above, our goals are oriented toward teaching coaches and sports instructors from different sports (and coaching levels) to take care of their mental health by recognizing stressful situations and applying techniques which may help them take care of themselves.

As sports environment can be very stressful, with this project we plan to increase coaches’ awareness of importance of well-being and mental health. We also want to receive information from coaches about their experience in dealing with stress and stressful situations.

We truly hope coaches will recognise and understand benefits of this program as they will be able to learn how to control the controllable things, such as their perception of the situation, emotional reactions, behaviour, but also preparation and potential progress in personal



development. We would like to help them establish positive mental health patterns they can apply and transfer to all areas of life.

### **Programme & activities**

Questionnaires and survey helped us find out which stressors have the most influence on coaches' mental health, general well-being and burnout level. Also, information on how they usually deal with the stress.

Workshops and activities we had so far, were designed to teach coaches relevant techniques for stress management and burnout prevention. They included lectures and workshops on:

- Mindfulness and body scan
- Breathing techniques (relaxation breathing and “box” breathing)
- ABC CBT method of perceiving stressful situations
- Control the controllable technique
- Problem-solving technique
- Coaches Social Support method (CSS)
- Facts, Feelings, Future method (3F)

Also, coaches and club leaders attended workshop “Promotion of the Project – How to promote Project online, on social media and networks”.

All these activities were presented during our group meetings, where we also had interesting team-building activities. During these meetings coaches were encouraged to share their experiences with other colleagues which was found to be very profitable.

So far, we had three international project meetings (in Ljubljana, Umag and Kirchdorf in Tirol) and one online meeting (via the Zoom platform). Each club (partner) will also have the opportunity to present the Project in their local community, to other colleagues and other professionals involved in sports.

### **Results**

So far, we had received very good feedback from coaches involved in this project, but official results and evaluation of implemented program we expect to have once the project will finish, in December 2022. Results, findings and program's activities will be published in a Manual

“Mental health awareness - guidelines for coaches”. This Manual will be available online and will be public, free to download. Hopefully, it will help coaches to deal with stress effectively, increase mental health importance and prevent professional burnout.

With the Manual available to download and coaches sharing their experiences, we hope the #TCYC movement will grow and continuously promote mental health and its importance for coaches in the sports environment.

## STRESS OF COACHES BASED ON TCYC DATA

Tanja Kajtna, Ph.D.

“How do you feel today? What do you want to do? What do you think about practice?” is a question every good coach should ask their athletes. In general, coach has 6 main areas of functioning (Tušak and Tušak, 2007):

- *Practice planning* – the most basic task of a coach, also running a professional sports team
- *Practice execution*
- *Practice success control* – steady and regular feedback, comparison with rivals
- *All-round care for the athlete* – making sure that all is taken care of...
- *Counselling* - in matters of practice, competing as well private affairs
- *Competition aspect* – a role – model for the athlete, help with pre-start routine, thorough and objective analysis afterwards and in essence, boosts the athlete’s confidence on a competition.

Personal practical and research experience shows, that coaches approach psychologists mainly through their athletes, while security of work in the coaching business is relatively low. Psychologists mostly feel that coaches struggle with their work and this struggle is seen also by their athletes. While more and more attention is paid to researching mental health in athletes – even the IOC issued a statement entitled *Mental health in elite athletes: International Olympic Committee consensus statement (Reardon et al., 2019)*, less attention is paid to coaches’ mental health. It may be frequently mentioned, but it is less frequently researched. Carson et al (2018) discussed the mental health of coaches through the areas of work life model, the difficulties of the coaching profession were discussed by Taylor (1992) and Hill et al. (2021), who stated that factors perceived to affect the wellbeing and mental health of coaches are *excessive workload, post-competitive loss, feeling of isolation*. This research is an important one as it uses in depth interviews with coaches, and one worth mentioning as well is that of Carson et al (2019), who found that 464 Australian coaches associate *mental well-being with managing the workload and autonomy over coaching-related tasks and activities*.

„High tension, poor nutrition, sleep deprivation, family conflict and social alienation are common in coaching. Such self-destructive behaviours are neither desirable nor sustainable, and they must be discouraged. Serving others, as coaches do their athletes, can be physically

and emotionally exhausting.“ (Team USA, 2020). – this statement shows the importance of helping the coaches maintain the psychosocial wellbeing.

Take care of your coach (#TCYC) is a Small collaborative partnership formed for an Erasmus+ sport project for the years 2021-22. Our Small Partnership is aiming to encourage mental health for coaches and trainers working in non-profit sport organisations and to create awareness of the coaches' mental health with athletes, parents and „management“. It takes place in several phases. Phase 1 was preparing a *questionnaire* to find out which stressors most influence their mental health state and general well-being and coping with the stressors. Phase 2 was development of the pilot programme for coaches - various activities, methods, and techniques for building the skills for a better mental health, in phase 3 we prepared activities, workshops, lectures, individual & group consultations with coaches, lectures and consultations with club members, athletes and their parents. Phase 4 is evaluation of the programme, sharing findings with other coaches, sports associations, and sports organisations regionally; manual “Mental health guidelines for coaches”.

We gathered the results of 143 coaches from countries, who participated in the TCYC project, we used our own questionnaire, asking about the main stressors they are facing, how their reactions to stress are and how they experience stress. Previous research (Lavbič, 2020) with this questionnaire shows, that the main stressors are pressure and own high expectations, unpredicted events on competitions (i.e. injuries), lack of motivation in athletes, lack of financial means and lack of time for family. In addition to this questionnaire, we also used the *Satisfaction With Life Scale* (SWLS; Diener et al. 1985), Burnout Self-test (Mindtools, 2020) and Perceived stress scale (PSS; Cohen et al., 1983).

**Table 1***Comparison of men and women*

		<i>gender</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>sig (t)</i>
stressors	unexpected events in competition (injuries...)	men	3,00	1,05	2,42	0,02
		women	2,58	1,04		
	lack of financial support	men	3,17	1,34	2,06	0,04
		women	2,70	1,35		
stress responses	hypersensitivity to stimuli	men	2,15	0,85	1,93	0,06
		women	1,87	0,88		
	using bad habits (smoking)	men	1,85	1,21	1,98	0,05
		women	1,50	0,85		
coping	meditation and relaxation	men	1,96	1,17	-2,70	0,01
		women	2,51	1,28		
	listening to music	men	3,17	1,15	-2,43	0,02
		women	3,66	1,25		

Table 1 shows us that there are several differences between men and women. Men find more stressor in unexpected events in competitions such as injuries and lack of financial support. Stress responses in men are more intense sensitivity to stimuli and more frequently using bad habits and women more frequently use meditation and relaxation and listening to music as coping mechanisms. The remaining differences in stress and stress responses and coping mechanisms were not statistically significant when it comes to looking for differences based on gender of participants in our research.

**Table 2***Comparison of coaches in team and individual sports*

<i>sport type</i>		<i>M</i>	<i>SD</i>	<i>t</i>	<i>sig (t)</i>	
stressors	my own expectations of athlete's progress	individual	3,68	1,01	-3,73	0,00
		team	4,23	0,73		
	differences between personal and club management's goals	individual	2,21	1,18	-1,97	0,05
		team	2,61	1,23		
	unexpected events in competition (injuries...)	individual	2,66	1,10	-2,14	0,03
		team	3,03	0,94		
	preparations for big competitions	individual	2,73	1,23	-2,41	0,02
		team	3,18	0,97		
stress responses	hypersensitivity to stimuli	individual	2,16	0,92	2,03	0,04
		team	1,85	0,81		
	break-up of personal relationships	individual	1,57	0,95	-3,17	0,00
		team	2,08	0,93		
	creating positive, motivational environment during practices	individual	3,32	1,31	-2,93	0,00
		team	3,87	0,88		
coping	spending time watching TV and with a computer	individual	2,71	1,12	-2,14	0,03
		team	3,13	1,15		
	looking for support from co-workers	individual	2,27	1,15	-3,67	0,00
		team	3,00	1,17		

Comparison of coaches who work in individual and team sports shows that coaches in team sports more frequently experience stressors own expectation of athletes, differences between their desires and what the club management desires, also unexpected events in competition and preparations for big competitions. Stress responses in team sports coaches are less sensitivity to stimuli than in individual sports coaches, more breakups of personal relationships and more frequently creating positive and motivational environment during practices. Coping mechanisms in coaches of team sports are more frequently spending time watching TV and spending time with a computer, coaches in team sports more frequently look for support from their coworkers.

**Table 3***Most common stressors, stress responses and coping strategies*

	<i>stressors</i>	<i>M</i>	<i>SD</i>	<i>stress responses</i>	<i>M</i>	<i>SD</i>	<i>coping</i>	<i>M</i>	<i>SD</i>
1.	my own expectations of athlete's progress	3,90	0,96	creating positive, motivational environment during practices	3,60	1,17	spending time with family	3,83	1,02
2.	my own expectations of high results	3,62	1,12	feeling energetic	3,34	1,12	physical activity	3,77	1,15
3.	lack of free time	3,29	1,28	working even more than usually	3,02	1,34	hanging out with friends	3,49	1,09
4.	my own expectations regarding career and professional development	3,29	1,16	increased exhaustion, lack of work energy	2,58	1,07	listening to music	3,41	1,22
5.	unexpected life events (i.e. covid)	3,18	1,17	increased irritability	2,53	1,05	spending time watching TV and with a computer	2,89	1,15
6.	lack of appreciation of my work	3,08	1,26	anger	2,42	1,01	traveling	2,89	1,27

The main stressors of participating coaches are their own expectations of athlete's progress, their own expectations of high results, lack of free time, their expectations regarding their professional development, unexpected life events and lack of appreciation of their own work. The most frequent responses to stress are creating positive, motivational environment during practices, feeling energetic, they start working even more than usually, also increased exhaustion, lack of work energy are present, they become more irritable and angry. The main coping responses are spending time with family, physical activity, hanging out with friends, listening to music, spending time watching TV and spending time with a computer and traveling.

These results are a good indicator that programmes such as TCYC are extremely important and should be further developed and scientifically evaluated.

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# **THE MATURE SPORTS PARENTS**

## **(A STRUCTURED SPORTS PSYCHOLOGY PROGRAM FOR A GROUP OF PARENTS OF ATHLETES)**

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### **Introduction**

What does it mean, to be the parent of an athlete? The stereotype is, that these are people who "spend" all weekends in the stands cheering for their children and during the week their "most important task" is transportation to training and back, taking care of the equipment and nutrition for their children - athletes. But in reality, there are much more than this, on the outside, the most prominent tasks. The role of the parents in sports is something that we (coaches and sports psychologists) are constantly learning about. Various roles are explored by sports psychologists and many other professions, but this content does not reach this group (parents and/or coaches, sports clubs) and has not yet been collected in one place.

In our practice as sports psychologists, we often meet with parents who are wondering and questioning their roles and tasks. Most times they just don't know what to say to their child, sometimes they don't know how to arrange things with the coach. They wonder, for example, what is the appropriate response to winning or losing after a match. They always want the best for their child, but they find themselves in a quandary from time to time, especially at the crossroads, when the children grow up, when they progress to a higher level of competition or when there are increased demands in the fields of school and sport.

We will present an expert view on some of the typical questions asked by parents of athletes and their coaches, to clarify the role of parents in sports. We called this structured program: The Mature Sports Parents.

The relationships we create in the sports club among parents of athletes, coaches, teachers and athletes are the key to successfully engaging young people in sport. The program was developed by American sports psychologists Loehr and Kahn (1989), called "The Parent-Player Tennis training Program." We followed their example and adapted it for wider sports settings, national background and culture.

When sport psychologists work with athletes, we especially focus on their mental preparation: athletes are practicing various mental techniques, learn relaxation and visualisation, control breathing, do exercises to improve concentration and study pre-performance routines. They learn to use these skills in very stressful situations at competitions to gain the necessary advantage to succeed.

And what is the role of the psychologist when working with parents? When working with parents, we focus mainly on aspects of communication, listening skills and non-verbal communication.

### **Involving parents in the sport of the child**

Parents can help their children stay relaxed before and during the competition. But they are also a source of stress. The goal of the program is, that the parents learn how to contribute to the development of an appropriate competitive and psychological atmosphere, without bringing more stress into the picture. Loehr (1986) did confirm, that most young tennis players reported feeling stressed by their parents.

First, let's see what stress is and where does it come from

There are three sources of the stress, according to Lazarus's stress theory (because the person assessed the situation as stressful) (Lazarus and Folkman, 1984):

- Damage, loss - it occurs when an athlete performed poorly in the match and there are negative consequences, there has already been some damage. We respond to such an event by expressing negative emotions or by believing that things will work out on their own.
- Threat - we expect damage, it is very likely, but it has not happened yet (expectation of bad performance). We can respond by devoting ourselves to destiny, we can hope that things will turn around and there will be no problem. In such cases, we often turn to friends or parents for help.
- Challenge - we assess a situation as a challenge when we have difficult requirements ahead of us, which we believe we will be able to handle. The result is usually excitement, and we usually respond to such a situation with positive thinking and preparation for the situation.

As stressors in sports other people, and also parents, are often mentioned, because parents are the ones who are very engaged in the situations before, during or after the competition. The stressors can be their views, words and suggestions.

Internal factors that affect a competitor's perceived stress are self-esteem, personality traits, innate propensity for anxiety, an expectation of success, motivation, mental readiness, and sometimes plain fear, tied to some concrete source. Then there are external factors, such as environment, teammates, opponents, equipment, technique, tactics and competition conditions. Are the parents the ones who can help the child to be relaxed before and during the match? Definitely.

When the parents are perceived as stressors, the coaches deal with the situation as best they think - they remove or ban the parents from the events (competitions, practices). But the matter is not that simple. Parents need to become part of the team, they need to learn about their role and their sport because the goals of the coach and the parents are the same. They all want the child to enjoy the activities, grow up healthy, pursue athletic goals and find happiness in their chosen sport. Parents (exceptions are only former elite athletes, but not always) need accurate and comprehensive information about what is expected from them. Parents, just like competitors, must learn about the sport, how to control their emotions, how to be confident, how to set goals and how to express their feelings. Good cooperation between the coach, athletes and parents is the foundation of good training, sports performance and success, and the relationship between them can be built through various activities.

### **Presentation of the programme: The Mature Sports Parents**

The program demonstrates to parents the set of skills they need to have, to be more than just regular sports fans to their children. With these skills, they can become more supportive of children and their sport, while enjoying watching their child grow and develop into the person they want to know.

Topics and chapters of the programme:

- Development of a young athlete
- Motivation in sports
- Stress, competitive stressors in sports
- Development of the family of an athlete (school and adolescence period)
- Coordinating sports and school, dual career

- The roles in the sport: the role of the coach, the role of the parents, the role of the athlete
- Influence of parents on children's sports activities
- Sports triangle and teamwork

### **A short recap of the Program**

The programme has 4-5 meetings.

1st Meeting: "Sports triangle: parents, coaches, athletes." The whole team participates.

Questions and tasks: Write three words or sentences about what do you think the sport is for, and why the sport is good? Members then make a list of at least 3 tasks that are specific to them, depending on what role they play in the sport. Then they write down five to six of their expectations and/or goals for the season. They are also encouraged, to write some goals that apply to the whole club/team.

2nd Meeting "Parents becoming more than just the fans" (only for parents, has 2 parts).

The first task is to make a poster about what they think about their behaviour and expectations. Second task: finish the sentences (In the sports team, I value the most... It motivates me the most ... What I like most about my role ...I don't like about my role...).

Task 3: they read the children's answers to the question "What is sport good for?" (The first task of the first meeting) and talk about what the young competitors are experiencing. Task 4: Reading the athlete's answers about the behaviour of someone who accepts their role (the second task of the first meeting), based on these answers, however, they plan how to re-design their tasks. Task 5 are communication exercises: active listening, giving and receiving feedback, and practising the "I sentence."

3rd Meeting "Time for the competitors"

First, they make a poster where they answer the same questions as to their parents. Then they discuss the stress and what they can control in the sports situations. We open the discussion with the questions like: "What would you prefer: to win a match with a bad result or with poor performance or to set a personal record in a big match where you would be fifteenth?" "How often in a week, do you experience good feelings of being satisfied with your sports progress?" "How often, in one week, do you get an award or

recognition (medal, trophy)?" "When you think about your best performance, do you remember the performance and the feelings during the performance or the announcement of the results?" "Which is easier to control - your effort and performance or your ranking?"

4th meeting: "The team"

This meeting is more open, the goal is to share the experiences between the parents, coaches and athletes. Here is a list of topics, which can be discussed at the 4th meeting:

- Parents talk to each other about how their wishes, beliefs and expectations affect the competitors.
- Managing the effects of the stressors (for athletes, for coaches, for parents).
- Parents and coaches make a specific list of the tasks they have in the competition and training.
- Talking about the reaction to the result: how to express joy and frustration?
- How to encourage the athlete to prepare on their own before starting, and how they can communicate?
- Problem-solving technique.

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## **EXPECT THE UNEXPECTED!**

Matej Fiškuš, mag.psych., sport psychologist

The body follows the mind, and it's important that an athlete's mental and emotional state is addressed prior to an event. Helping to define expectations is the first step in making sure an athlete is mentally in the right place. Therefore, psychological preparation for the unexpected scenario in the field is crucial for every athlete. Expectations can be defined using SMART technique for goal setting. This is an extremely powerful technique for enhancing performance so it is one of the most important strategies that athlete can implement for success. Furthermore, it helps to focus attention and it is critical to maintain and enhance motivation. SMART goals give direction both in the short term and the long term. Using SMART goals athletes can improve focus on what is important and gain a sense of control (Healy, Tincknell-Smith & Ntoumanis, 2018).

This SMART acronym aims to break down five key aspects to achieving goals. This is to help ensure all areas are focused on the individual making them effective. Athletes often don't see the value in setting goals, consider them boring and taking up too much time. They can also set themselves the wrong types of goals and fail before they even start. Therefore, education is key to the process. Ultimately it is worth the effort to overcome these obstacles and coaches should highlight the value of goal setting for athletes to help them achieve optimal performance. It is worth knowing that there could be outcome goals and process goals. Outcome goals deal with specific results in competition, while process goals are the aspects a competitor should be concentrating on when carrying out a specific skill.

SMART goals should be realistic in order to avoid excessive expectations upon themselves believing this will still result personal best or optimal performances. The reality is that excessively high expectations rarely result in high-level performance. When expectations are high, so is the pressure to meet those expectations. High expectations lead to increased pressure and others negative consequences for athletes and teams, such as: reduced confidence, anxiety, fear of failure, overthinking, inability to move past mistakes, negative thinking, under-performance etc. Excessive expectations are key aspect of maladaptive perfectionism. People whose perfectionism is maladaptive often feel the need to be in control of every aspect of their lives and environment. They set unrealistic goals, tend to be highly self-conscious, develop negative attitudes when things don't go as planned and therefore have difficulties in control of

their emotions. On the other hand, adaptive perfectionism is defined as perfectionism that is healthy and relates to an intense effort that is put forth to achieve a certain goal. Adaptively perfectionistic individuals set high, but realistic standards, and don't resort to harsh self-criticism when these standards are not reached (Stoeber, Madigan and Gonidis, 2020). An example of adaptive perfectionism is the star track runner who continuously sets out to beat his best time, but accepts results when this doesn't happen.

Furthermore, it's important to discuss potential outside stressors that could lead to negative self-talk or doubt. Athlete sometimes deal with too much expectations from environment (organisations, media, sponsors), there could be stress from relationships with friends or family etc. All of these factors can weigh heavily on an athlete's mind coming into an important period in their training, and ultimately can negatively impact performance.

As psychologist, we have to give these more subtle components of training the respect they deserve and use them to inform any discussions around expectations and outcomes with our athletes. If the mind isn't fit then we can't expect excellence in other areas.

After the competition, it is useful to make review competition. Post-competition review should cover expectations. Were expectations met? Did performance live up to both the athlete's and coach's expected outcome? The answer to these questions should help inform both parties on their approach moving forward. Oftentimes review will highlight the need for change to the original plan. This might mean further defining or changing expectations, or it could mean shifting the actual training approach. Competitions are major learning experiences for both athletes and coaches, and they should be utilized as such. Every competition is an opportunity to learn, grow, and show up more prepared the next time around. Learning from mistakes is the key component in growth mindset. Carol Dweck noticed when faced with failure, some students were able to rebound and grow, where others were devastated by even the smallest setbacks. This observation led her to study the behavior of thousands of students, eventually coining the terms fixed mindset and growth mindset. Basically, Dweck characterizes individuals who believe they have the potential to improve as having a growth mindset while people with a fixed mindset believe they were born with or without the ability to excel at a task (Yeager & Dweck, 2020). In sport, athletes with a fixed mindset do not see the benefit of spending extra effort on improvement; therefore, they are often crippled by failure. Athletes with a growth mindset can typically win and lose with grace and enjoy the success of other athletes. This mindset leads to open minded, hardworking, calm, and coachable athletes. The good news is, everyone has the

ability to change mindset. It is important to understand which mindset the athlete gravitates toward and at what times. Once you understand when you are getting stuck in a fixed mindset, you can begin to make the necessary changes to transition to a growth mindset.

The final strategy to prepare for the (un)expected circumstances is mental imagery. Mental imagery is a multi-sensory process that draws on the senses to create a vivid mental image of a particular process. Imagery is essentially the process of creating and recreating an experience in the mind's eye, which means it can be practiced at just about any time, anywhere. In the context of sports, mental imagery is defined as the experience of an athlete imagining themselves while performing certain skills. The two most common techniques used to generate images are visual (what an athlete sees) and kinesthetic (the experience of the body while performing a movement). Numerous studies have also shown that mental imagery improves an athlete's motor skills during competition as well as their ability to learn new skills during training (Jones & Stuth, 1997). In competitive sports settings, elite athletes use imagery to enhance training, performance, and rehabilitation - even at the Olympic level. Coaches and sport practitioners often encourage their athletes to focus on process goals rather than outcome goals. The reason is pretty obvious. Athletes have more control over their performance than the outcome.

In order to prepare for the unexpected scenario, athlete can imagine some unwanted, but probable events. The main reason for preparing for this events is developing cognitive and behavioral strategies which can be used in this situations so that athletes can have prompt and purposeful reaction. Using mental imagery can be beneficial in terms of emotional regulation and decision making. Furthermore, routines such as mindfulness breathing exercise and positive self-talk will help athletes to gain control in harsh environment. Once the athlete has the routine to use some of the basic techniques to control excitement, learn from setbacks and improve performance, there is a greater probability to succeed.

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# WEIGHT MANAGEMENT AND LIFESTYLE CHANGES

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## **Introduction**

Overweight and obesity have important consequences for morbidity, disability, and quality of life. Statistics in 2022 explain the obesity as an epidemic that affects five hundred million adults worldwide. Worldwide obesity has nearly tripled since 1975. Thirteen percent of adults in the world are obese. Thirty-nine percent of adults in the world are overweight. On average, one out of every three adults are obese, which is about 36% of the population. (Harvard, 2020). One-in-five children and adolescents, globally, are overweight. Most of the world's population live in countries where overweight and obesity kills more people than underweight. A tenfold variation in obesity and overweight rates can be seen across OECD countries. Overweight and obesity are the fifth leading risk for global deaths. At least 2.8 million adults die each year because of being overweight or obese. Obesity is classified as epidemic. An estimated five hundred million adults in the world are obese. An estimated one billion adults will be obese by 2030.

Overweight and obesity are abnormal or excessive fat accumulation that may affect health. Body mass index (BMI) is used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters ( $\text{kg}/\text{m}^2$ ). Overweight is a BMI greater than or equal to 25; and Obesity is a BMI greater than or equal to 30. For children, age needs to be considered when defining overweight and obesity.

## **Causes of obesity and overweight**

The main cause of obesity and overweight is an energy imbalance between calories consumed and calories expended. Meaning, an increased intake of energy-dense foods that are high in fat and sugars; and at the same time decrease in physical activity. Obesity is caused by a combination of physical, psychological, environmental, and/or genetic risk factors. This problem expanded due to COVID-19 pandemic and its consequences on work from home and increasingly sedentary nature of many professions. At the same time lack of education on self-

help and lack of use some online platforms for teams' activities. Some diseases and medical conditions can also cause or contribute to obesity.

Some of the leading causes of obesity are:

- 1.Lifestyle choices: eating unhealthy, processed, and fried foods; physical inactivity; smoking.
- 2.A family history of obesity
- 3.Social and economic problems reflect on health habits: some studies show that low income can contribute to obesity due to lack of resources to buy healthier foods.
- 4.Underlying medical conditions.

Overweight and obesity impact overall health and wellbeing. More than twenty-five other diagnosis impact health: cardiovascular diseases (heart disease and stroke), the leading cause of death; high blood pressure; diabetes Type 2; high cholesterol; musculoskeletal disorders, mostly osteoarthritis – joints' degenerative disease; some cancers. In children and youth, premature death, and disability in adulthood. Many experience breathing difficulties, increased risk of fractures, hypertension, insulin resistance and psychological effects. Forty four percent of the diabetes burden, 23% of the ischemic heart disease burden and between 7% and 41% of certain cancer burdens are attributable to overweight and obesity. Here are some common symptoms of obesity: being overweight; tiredness: joint or back pain: low selfesteem/low confidence; snoring and sleep apnea; increased sweating.

### **Treating overweight and obesity**

Treatment for obesity often involves exercise, new eating habits, nutritional supplementation, medication, and in some cases, surgery. Many doctors are working with patients to help fight obesity, and there are countless organizations and institutions focused on preventing, treating, and raising awareness about obesity.

Treating obesity involve weight management programs that are individualized. Healthy Living by IBD 21-days program is one of those that creates results. Also, Junior Camp by IBD 12-days program for children and adults.

### **Overweight and obesity are preventable**

Preventing obesity involves a combination of many changes, such as: physical activity; eating healthy foods; reducing stress/ burnout; limiting screen time; avoiding processed foods;

consuming plenty of fiber; having dedicated support from family and work colleagues/friends and social group.

Therefore, at the societal level it is important to:

- 1.Support individuals through sustained collaboration of many public and private stakeholders.
- 2.Make regular physical activity and healthier dietary choices available, affordable, and easily accessible to all – especially the poorest individuals.
- 3.The food industry can play a significant role in promoting healthy diets by: reducing the fat, sugar, and salt content of processed foods; ensuring that healthy and nutritious choices are available and affordable to all consumers; practicing responsible marketing especially those aimed at children and teenagers; ensuring the availability of healthy food choices and supporting regular physical activity practice in the workplace.

### **Education is key to lifestyle changes**

Today's world runs at a faster pace than ever before, and we all are stressed out as a result. Life is imperfect and it is impossible to navigate it without some stress. Successful weight loss requires a new set of habits. A separate set of habits will create a different result in weight management. Also, eating certain foods may be comforting but may result in feeling of guilt and shame afterwards. This is a dual relationship.

The first step is motivation that only psychologists can do. In parallel by making the choice of healthier foods and including regular physical activity are the easiest way to preventing overweight and obesity. Most important is to follow 21 -days routine to start changing old unhealthy habits: limit energy intake from total fats and sugars; increase consumption of fruit and vegetables, as well as legumes, whole grains, and nuts; and engage in regular physical activity (60 minutes a day for children and 150 minutes spread through the week for adults). Individual responsibility can only have its full effect where people have access to a healthy lifestyle. At the same time companies should understand that obesity is severe health problem and that those employees should have overall support.

### **Conclusion**

To repeat: overweight and obesity are the fifth leading risk for global deaths. At least 2.8 million adults die each year because of being overweight or obese. Individual responsibility can only have its full effect where people have access to a healthy lifestyle. Obesity updates focus specifically on communication aimed to tackle obesity, by improving nutrient information

displayed on food labels, using social and new media to sensitize the population, or by regulating the marketing of food products. Better communication helps empower people to make healthier choices. Learning more about obesity is a helpful first step toward managing the condition and living a healthier life. That could decrease costs related to hospital treatments, or absenteeism from work. For successful weight management, lasting change requires only one thing: consistent action over time.

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# **LEARNING HOW TO UNLEASH TRUE PERSONAL POTENTIAL – KEY NLP PRINCIPLES IN WORKING WITH INDIVIDUALS AND GROUPS**

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The desire for developing is inherent to human. In doing so, human potential is immense. Whether individual or group achievements, we have shown that we have the capacity and strength to realize what was considered unachievable.

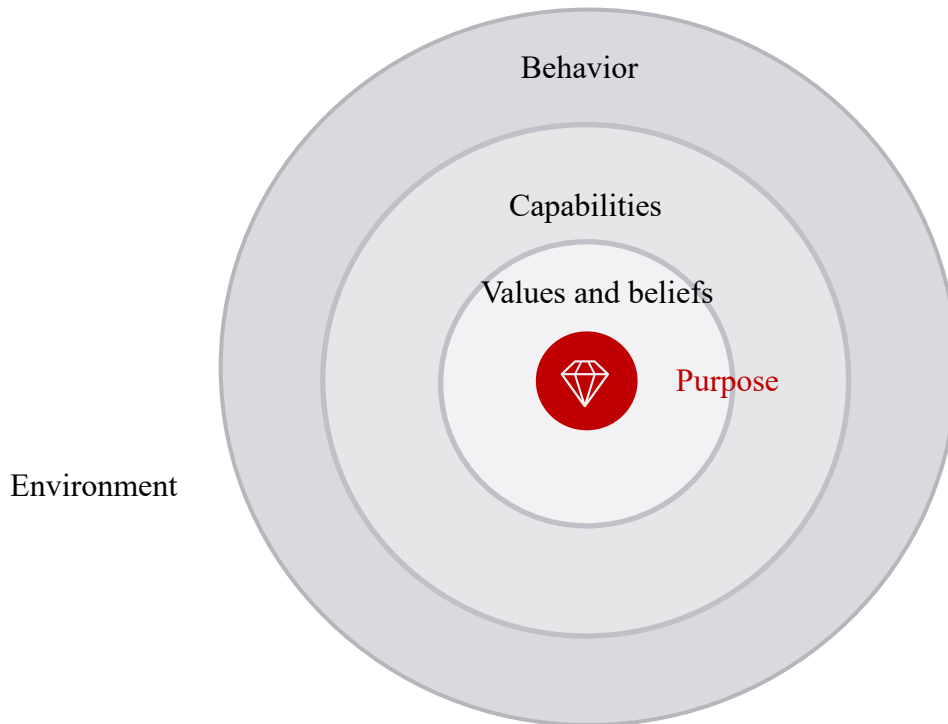
Sport is human activity where boundaries, both personal and collective, are constantly shifting. Regardless of whether we speak about professional or recreational athletes, children and youth or adults, sport carries the need for learning, progress and achievement. It is a training ground for the human potential development at all levels – physical, emotional, psychological, social, and even spiritual.

NLP or Neuro-Linguistic Programming or Psychology is a study of human experience and excellence (O'Connor, 2013). It was created in the 70s of last century and has since developed bringing insights about human potential and how to develop it (Buchheit & Schamber, 2017). The interesting thing about NLP is that it is not based on theories, but on concrete practice. Its founders, Richard Bandler and John Grinder, a mathematician-linguist and psychologist, wanted to understand what makes people great at what they do. By studying concrete people, their way of thinking, knowledge and skills, they discovered what conscious and unconscious strategies they used to achieve results that no others could achieve (O'Connor, 2013). Their goal was to define the structure of excellence, assuming that these insights would show others how to apply the same in their lives. Over the last 50 years, practice and science have confirmed the effectiveness of this knowledge (Buchheit & Schamber, 2017). Today, NLP is successfully used in different areas of life – from psychotherapy, personal development and education to business and professional realization to sports.

This paper presents one of the fundamental models of the NLP and how its application in sports can help athletes (and all who support them) develop their potential and achieve their goals.

## What are the hidden roots of excellence? - The Neuro-logical Levels Model

According to the NLP Neuro-logical Levels Model, the functioning of each athlete can be viewed through the following levels:



### 1. Environment: Where, when and with whom?

It refers to the environment in which the athlete operates and everything that happens outside of him./her and encourages him/her to have a certain reaction (coach, colleagues and teammates, family and others who accompany the athlete, club, sports arena, wider social environment, etc.).

The environment has a strong influence on each athlete, especially at the stage of his maturation - physical, mental and emotional. On the other hand, the athlete often cannot directly influence the environment in which he develops, trains and performs. That is why the problem arises when he directs all his attention to the “outside”, looking for the causes of his performance and his behavior exclusively in external circumstances.

Changing the environment can sometimes lead to significant personal changes and unleash hidden potential. On the other hand, it often happens that the problem actually lies elsewhere and despite the athlete changing his environment, there are soon similar frustrations and problems that (s)he has had before. Also, often the athlete is not in position to change the environment, so focusing on this segment can be very frustrating and exhausting, while at the same time failing to see what (s)he can do within him or herself, in order to influence the results, and indirectly the environment.

Successful athletes can often thank their success for being able to thrive in different environments, focusing on what they needed to do in order to achieve the desired outcomes.

## **2. Behavior: What?**

It refers to what an athlete does, day by day, whether it is a training process or a performance in a competition. This is the most visible and obvious level of functioning, so the athlete and the people around him, spontaneously focus on it, especially when undesirable outcomes and results occur. With this situation often comes great pressure (whether it comes from inside or outside) and expectations rise, in formula of "You shouldn't do this! Instead, do this!"

However, this level of functioning is just a consequence and a result of how an athlete functions at "deeper" neuro-logical levels and the problem, as well as solutions, are most often found in these, less visible and conscious levels.

## **3. Abilities: How?**

This level describes everything an athlete is capable of doing – it refers to skills, knowledge, strategies and ways of getting results.

Let us take, for example, an athlete who is the best player within his team and a pretendent for the captaincy, but cooperates poorly with the rest of the team and often comes into conflict. The first question that is important to ask is whether (s)he has the skills of quality communication and teamwork. In particular, does (s)he know how to deal with each other's misunderstanding; does (s)he understand the communication pitfalls that each team falls into; does (s)he know how to communicate his or her desires and needs in a constructive way; does (s)he knows how to understand others, especially those who are different.

It is difficult to expect that the athlete will express the desired behavior if (s)he lacks the necessary knowledge, skills and strategies, be it the mental or physical aspect of the sports performance. At the same time, even when an athlete adopts a new skill, it will be difficult to achieve continuity in excellence, if this is not supported and aligned with deeper neuro-logical levels.

#### **4. Beliefs and values: Why?**

Beliefs represent the principles that guide an athlete day by day. They influence how they will perceive themselves and their environment, and what they will consider true and necessary. That is why they have direct influence on behavior. In doing so, they can be supportive or restrictive. Values, however, refer to what is important to the athlete and what are the reason why they do something.

In story of athlete who has problems with communication, it is important to ask what beliefs (s)he has, that disable him/her in quality teamwork. If (s)he believes that someone else's behavior is directed against him/her; if (s)he believes that people should not be relied upon and will hurt him/her; if (s)he believes that (s)he is not worthy of other people's attention and love – the athlete will very easily and quickly get into an offensive and aggressive attitude towards others, because this is his/her way of protecting him/herself from the negativity (s)he expects from others. If to these beliefs are added the value where it is more important for the athlete to be the best, regardless of what result the whole team will achieve, then his/her coming into conflict with others becomes expected.

In such a situation, changing the environment or giving concrete instructions on how to behave, and even attending some education about teamwork with the aim of developing communication skills, will hardly lead to a more permanent change, if there are still such beliefs and a set of values in the background. That is why it is important to actively work on building new, supportive beliefs, which requires active and conscious effort.



## **5. Identity: Who am I?**

Identity represents an athlete's fundamental sense of self and consists of the core beliefs and values that define him/her and his/her purpose in life. It is built throughout life and is very resistant to change.

If we return to the previous example, an athlete who perceives him/herself as an individual or a person who cannot influence others, it will be difficult to change all those beliefs that limit him/her in pursuing good relationships with his teammates. On the other hand, raising awareness and working to build the identity of oneself as a leader, who is in the service of the team, and working to understand the responsibility of the captaincy role, has the potential to trigger change and alignment at all previous neuro-logical levels.

## **6. Purpose: How do I contribute?**

This is the deepest neurological level that encompasses questions such as: Why am I here? What is my purpose? How do I want to contribute? Becoming aware and creating change at this level has a profound impact on all other levels.

Connecting with own sense of purpose and desire to make contributions is the strongest driver and source of energy in achieving goals. This is especially important in situation where great perseverance, motivation and successful coping with obstacles and failures are important – everything that is inherent in sports and the sport environment.

## **Principles of human potential development using The Neuro-logical Levels Model**

There are three fundamental principles on how to use this model with the aim of developing and unleashing human potential:

1. The greatest perseverance and motivation come when the athlete has clarity as to why (s)he does what (s)he does (*values*), when what (s)he wants to achieve is aligned with the beliefs (s)he has about him/herself and the world (*beliefs*), his/her sense of self (*identity*) and his/her own contribution (*purpose*), and when (s)he knows how to do it (*capabilities*). Achieving success, as well as coping with failure, becomes easier when all neuro-logical levels are aligned with each other and directed in the same direction. Then the athlete is at his/her best.

2. Although it is much easier to make a change in the environment (for example to change a coach, team or club), by creating the desired state at deeper neuro-logical levels and encouraging changes "from the inside out", a great space for unleashing true potential opens up.
3. If the change is not triggered at the „right level“, the likelihood that the athlete will achieve the desired objectives and unleash his/her full potential will be significantly reduced. In doing so, change should always be encouraged at a deeper level than where the athlete "gets stuck" and encounters problems, as this automatically leads to alignment and changes at other levels.

The Neuro-logical Levels Model and related principles give guidance on how to better understand the behavior and results that the athlete or the entire team achieve. They also give a clear map of what everything needs to be systematically worked on in order to develop their full potential and achieve the desired goals.

Sport has always been and will be one of the most powerful training grounds for learning about life. By understanding themselves better and learning how to take responsibility for their own activities on the sports field, athletes learn how to unleash their potential and succeed in all other areas of their lives.

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# FROM „YOU CAN'T” TO PARALYMPIC GAMES & HOW SPORT PSYCHOLOGY HELPS

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Paralympic Games represent the highest level of sport for athletes with disabilities. In order for the paralympic athletes to be successful and reach their full potential, they need to be ready in all areas of sport preparation: technical, tactical, physical and psychological. Implementation of psychological skills training for athletes with and without disability is practically the same since it is designed to fit the individual needs of each athlete. However, sometimes some modifications are required when working with an athlete with disability and those modifications can start with psychological assessment and could continue throughout the implementation of psychological skills training program.

There is no argument that psychological skills training is as important and useful to athletes with disability as it is to athletes without disability, and the applicability and usefulness of it are confirmed in the existing literature (Blumenstein i Orbach, 2015; De Bressy de Guast et al., 2013; Hanrahan, 1995; Lim et al., 2018). Those programs are usually multi-modal and include techniques such as goal setting, controlling arousal levels, self-talk, imagery, attention management, cognitive restructuring, routine development, competition preparation, concentration training, working on athlete's self-confidence and injury management (Hanrahan, 1995; De Bressy de Guast et al., 2013; Lim et al., 2018). Newer literature also suggests including mindfulness, acceptance and gratitude as well as psychological flexibility as potential interventions while working with athletes with disabilities (Guerrero, Martin, and Prokesova, 2021; Lundgren, Reinebo, Näslund, and Parling, 2019).

However, before starting to work with athletes with disabilities it is important that sport psychologists learn about disability sport through mentoring and reading the publications about the topic, as well as reflect on their beliefs and assumptions about athletes with disabilities (Guerrero, Martin, and Prokesova, 2021). Furthermore, it is essential that sport psychologists understand athlete's disability and how it affects their training and life (e.g. dealing with pain) (Guerrero, Martin, and Prokesova, 2021) as well as understand that athletes with disabilities

often have complex motivation structure that goes beyond just reaching their sport goals (e.g. promoting disability sport, fighting marginalization) (Martin, 2016). Since the athletes with disability often have numerous experts included in their sport teams as well as assistants who help them with everyday activities, it is important for the sport psychologist to learn about their roles and to cooperate with them in order to create optimal surroundings for the athlete to reach their full potential. One of the main figure is a coach who has to be continuously introduced to psychological preparation process and cooperate fully with a sport psychologist, especially in competition phase and during final preparation prior to peak competitions.

The goal of this paper is to present one model of psychological preparation for working with paraolympic athletes.

### **General outline of psychological skills training program for paralympic athletes**

Our psychological skills training always starts with psychodiagnostics. Literature also suggests that psychological skills training program should be individualized and based on detailed assessment of athlete's needs as well as demands of particular sport (Barić & Trboglav, 2006; Rushall, 2006; Ziv & Lindor, 2013). This assessment should include both quantitative (e.g. questionnaires) and qualitative (e.g. interviews) methods (Weinberg & Williams, 2006). After assessment the results are presented to the athlete and the coach in a form of individual psychological profile. Example of one such profile could be seen in Barić & Trboglav (2006).

The results of psychological assessment represents a base for creation of initial plan for psychological preparation individualised to fit the needs and goals of each athlete. Alongside with psychodiagnostics starts the education of the athletes, coaches and support staff about the psychological variables which are important for sport performance. This education continues throughout the whole duration of the cooperation between athlete and sport psychologist. It is very important to note that sport psychologist is part of the team and should cooperate with all other members of sport team, especially with the coach.

After the initial assessment and creating the program outline, the next step is to start a psychological skills training. It is a longterm process and ideally it would last an olympic cycle, or at least one season before qualification for the Olympic games. This include working on basic psychological skills such as goal setting, concentration, self-confidence, emotional regulation, arousal regulation, motivation etc. It all happens within a framework of developing awareness and acceptance of different internal processes, with intention to help the athlete

understand how the mind works and how he/she can use some psychological skills within sport preparation process. Here athlete is introduced to the connection between thoughts, emotions and behavior, as well as practical implementation of some mental training techniques (breathing, visualisation, relaxation, mindfulness and concentration exercises, goal setting, self-talk, key-words, cognitive reconstructing, biofeedback, thought stopping, centering, using body posture to foster emotional state etc). Very soon after introducing them and training them in „quiet“ office setting, these skills are trained and implemented during or as a part of the sport training whenever possible, in cooperation with a coach. It is important that athlete can use those techniques during real sport situations both during training and competition. Any new skill is first implemented into training and adequately trained before it can be gradually implemented into competitions. One of the main skills is to learn to analyse their sport performance on trainings and on competition in relation to the goals attained, and it is an effective way to evaluate their own progress.

Regarding the competition preparation, the pre-competition and competition routines are developed and implemented. Each competition is analysed regarding the specific goals and psychological techniques/skills that are used in order to implement modifications where necessary.

The program is regularly evaluated using the feedback from the athlete, coach and other team members as well as quantitative results from the questionnaires.

During this whole process athlete's role is very active and it is essential that they participate in adapting the tools and techniques to their needs as well as practice techniques regularly (Nowicki, 1995; Rushall, 2006). Athlete should meet with sport psychologist on a regular basis (e.g. once a week) over a longer period of time. The idea that the sport psychologist should be regular member of the professional and coaching staff that works with a paralympic athlete on a regular basis is part of the other psychological preparation programs described in the literature (e.g. Blumenstein and Orbach, 2015).

The specificity in working with paralympic athletes derives from their level of disability and, especially if the athlete competes on the POG for the first time, in identifying additional stressors related to travel, olympic village stay and competition regulations (especially in Covid period as it was Tokyo 2020). It is useful to prepare a plan B in advance in order to reduce the sources of potential stress. It should be fully coordinated with a coach and athlete's assistant, and separate work with them regarding the POG games stay and competition may be beneficial.

Any olympic athlete is the highest level athlete with strong work ethic, motivation and mental toughness. In a way it can be said that paralympic athletes have developed those characteristics even to the higher level because it was the only way to overcome their own physical limitations besides all other (sport) opponents. At the end, those athletes teach us how to love, accept and respect the strongest tool any athlete has – their own body.

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