Can We Coach the Mind?

The Case Study of How to Effectively Drive Athlete Performance

Miguel Gonçalves

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Resumo

"Conseguimos Treinar a Mente? O caso de estudo de Como Impulsionar Efetivamente o Desempenho dos Atletas"

Miguel Gonçalves

Contexto e objetivo: Este artigo analisa o estudo de caso de um Programa de Treino Mental, com o intuito de aprimorar as práticas profissionais de treinadores mentais e fornece uma nota de ensino discutindo melhorias sugeridas pela literatura.
Método e resultados: Utilizando uma mistura de técnicas de coaching e training, o programa de 8 meses concluído por dois atletas enfrentou alguns contratempos devido à falta de motivação e comprometimento dos atletas. Os resultados da autoavaliação foram positivos, porém não totalmente apoiados pela avaliação de pessoas com relações próximas.
Conclusões: Além das melhorias gerais no método de avaliação (implementando o TOPS 2), na sessão (adicionando mais tempo de prática de habilidades e ferramentas mentais) e na estrutura do programa (seguindo as fases de educação, aquisição e implementação para uma habilidade, ferramenta ou plano mental de cada vez), a descoberta mais relevante foi que não existe um programa de Mental Coaching ideal, sendo necessária a personalização para atender e desenvolver as fraquezas psicológicas individuais.

Palavras-Chave: desempenho; treino de competencias mentais; psicologia do desporto; coaching; motivação

Abstract

"Can We Coach the Mind? The Case Study of How to Effectively Drive Athlete Performance"

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Background and purpose: This paper reviews the case study of a Mental Coaching Program, with the intent of enhancing Mental Coaching professional practices, and provides a teaching note discussing improvements suggested by the literature.

Method and results: Using a mix of coaching and training techniques, the 8-month program completed by two athletes, has encountered some setbacks due to athletes' lack of motivation and commitment. The self-assessment results were positive however not fully supported by the peer assessment.

Conclusions: Apart from overall improvements in the assessment method (implementing the TOPS 2), the session (add more mental skills, tools practice in session) and program structure (follow the education, acquisition, and implementation phases for one mental skill, tool or plan at a time), the most significant breakthrough was that there is no idyllic MST program, personalization is required in order to meet and develop the individual's psychological weaknesses.

Keywords: performance; mental skill training; sport psychology; coaching; motivation

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Introduction

Many athletes have psychological hurdles that impair their performance and capacity to enjoy their sports practice or competition activities. However, Mental Skill Training (MST), also known as psychological skill training (PST), can help athletes improve their consistency in great performances and increase their enjoyment. Citing Creasy (2009, p.13), *"Athletes from amateur to the elite can improve their performance by practicing mental skills as diligently as they practice their sports"*.

This study aims to evaluate the results and structure of a mental coaching program developed based on sport psychology and personal development books, on-the-job experience, and psychology and coaching courses. The teaching note will include suggestions for future MST programs based on the study's results and new research.

The program was divided into three parts. Firstly, the Mental Coach did an initial assessment, featuring the following areas of sports psychology: Mental skills, Emotion Regulation, Pre-game preparation, Feedback, and Self-Reflection. Then, the Coach personalized the pre-defined program for each participant, to meet every week for 8 months. There are two athletes involved in this study: athlete 1 who played padel, would meet once a week; and athlete 2 who played tennis, would meet three times a week. Finally, after 8 months, the Coach gathered the results to draw conclusions and adapt the program to the athlete's needs.

This study consists of a case study about the program developed by the Mental Coach, and a teaching note at the end with questions and answers found in other MST and PST research.

Literature Review

Mental Skills Training (MST) Impact on athlete development

Mental skills training (MST) is a systematic and consistent utilization of mental training tools - goal-setting, imagery, relaxation and energization, and self-talk - to develop the mental skills - motivation, energy management, attention, stress management, and confidence - which will not only help athletes to consistently perform close to their potential but also increase their enjoyment and fulfillment in both practice and competition (Burton & Raedeke, 2008).

The significance of mental skills training (MST) in improving athletic performance has been widely acknowledged since the early 1980s. Research has consistently shown that psychological factors such as concentration (Durand-Bush, & Salmela, 2002), motivation (Gould, Dieffenbach & Moffett, 2002), imagery (Gould, Eklund & Jackson, 1993), and mental toughness (Jones, Hanton & Connaughton, 2002) play crucial roles in an athlete's performance. Particularly, the foundational works of Durand-Bush & Salmela (2002) and Gould, Dieffenbach & Moffett (2002) have highlighted the necessity of integrating MST into athletes' regular training regimes for overcoming psychological barriers and optimizing performance. About 85% of the studies conducted evaluated positive performance results, so there's a consensus that MSTs are accurate programs to enhance athlete performance (Burton & Raedeke, 2008). Greenspan & Feltz (1989), Vealey (1994), Weinberg & Comar (1994), and Meyers, Whelan, & Murphy (1996) collectively assert the effectiveness of MST in enhancing sports performance.

Mental training is part of the Personal Development industry. Athletes are learning how to set effective goals, manage emotions and pressure, stay focused, and self-motivate, these are skills that can be easily translated to other aspects of life, like career, music, and relationships. Sports in general build overall competencies such as leadership, interpersonal skills, and self-discipline, however, coaches are responsible for helping athletes to gain these psychological benefits. Mental training provides a framework for the development of athletes' life skills (Burton & Raedeke, 2008).

An Effective MST Program Structure

Three phases compose an effective MST. The first is to educate and evaluate athletes to target their weaknesses. Secondly, is to acquire skills, and finally to implement and overlearn these mental skills in athletes (Burton & Raedeke, 2008).

The education phase starts with educating athletes about the benefits of practicing mental strategies and includes successful stories of athletes using MST to perform at their potential. Two example stories would be Greg Louganis's performance in the 1983 Olympic Games or the 1976 Japanese gymnast who performed with a broken leg (Gould & Eklund, 2007). Then, an evaluation is made through a self-assessment. Once identified the athlete's strengths and weaknesses, the coaches should only select the top 1 to 2 weaknesses to be addressed per season (Gould & Eklund, 2007).

The next phase is the acquisition phase, which focuses on implementing training schedules and exercises targeting identified weaknesses whether on mental skills or mental tools. Coaches should research these strategies and teach athletes how to practice. Collaboration with players is incentivized to define interpretations of targeted weaknesses, ensuring alignment with individual perceptions and research definitions.

The third and final phase is implementation, where athletes work to constantly perform successfully under stressful competitive situations, it is crucial for mental training tools, skills, and plans to be automated. According to Burton (2008, p.241), *"The key here [the implementation phase] is extensive overlearning. Many athletes believe they need only to practice enough to acquire the tool, skill, or plan. However, being able to perform a skill does not ensure that an athlete can execute it automatically, especially in critical competitive situations. Under stress, performers lose their ability to think their way through things and must react instinctively based on highly automated responses."*.

A MST program will only be effective if the athlete can see how psychology affects performance (Gill, 2000). Athletes will make time and dedication to the MST, once they understand its benefits. MST has a lot of advantages, however it does not create performance miracles. Some coaches and athletes have unrealistic expectations, believing that MST can enhance athletes' performance beyond their physical limitations and expect great results with little effort. In Mental skills training, like physical training, athletes shouldn't expect to

become superstars after just a week, six months, or a year of training (Burton & Raedeke, 2008).

Mental Training Tools for Padel and Tennis

Given the unique psychological demands of individual and team sports like Tennis and Padel, the role of a personalized MST would help manage pre-game anxiety, enhance concentration, and foster a growth-oriented mindset which is crucial for high-pressure environments characteristic of these sports. One of the biggest themes in competition is letting the mind work against us rather than for us. Performance is equal to "potential" minus "interference" Gallwey (2000).

For example, according to Russel (2019) and Habay (2023) fatigue can interfere with sporting performance. Tennis and Padel elite players have tournaments regularly and practices causing continuing mental fatigue (García, 2021), and impairing their psychomotor performance (García, 2023). García (2023, p.2) states that *"Padel imposes high cognitive demands, including decisionmaking (e.g., move based on ball direction and speed), attention (e.g., spot opponents' tendencies), memory (e.g., remember coach's instructions), and response inhibition (e.g., ignore distractions)."*. Also, in this 2023 study, Professor García, found out that Brain endurance training, through the Stroop cognitive task, enhanced skill-based psychomotor performance when fatigued compared to standard padel training. Brain endurance training is a countermeasure that promotes mental fatigue durability. Padel players increased their shot accuracy after the BET practices (García, 2023).

Based on Professors D. Burton and T. Raedeke's (2008) work, here is an example of how using the four mental training tools can develop athletes' mental skills:

Table 1. How to Use Mental Training Tools from (Burton & Raedeke, 2008).

Goal setting
Setting realistic but challenging short-term goals provides a sense of direction, thereby increasing motivation as reflected in increased effort and persistence.
Challenging, realistic goals help athletes get into their optimal energy zone and direct that energy to the task at hand.
Effective goals direct athletes' attention to what they need to focus on to succeed.
Although striving to win is important, focusing on winning can create excessive stress. When athletes perceive

the challenge not as winning but as achieving their own realistically set performance goals, the challenge will always be near the athlete's present skill level and will create an optimal skill–challenge balance.
Consistent goal attainment raises self-confidence.
Imagery
Teaching athletes to imagine themselves attaining their goals can help raise their motivation.
By imagining previous strong performances, athletes can identify their optimal energy levels and strategies for getting into an effective energy zone prior to performing.
Using imagery effectively requires the ability to focus on desired images and thus can be used to develop attentional skills.
Imagery can be used to help athletes manage competitive stress. Athletes are less likely to experience elevated stress if they have imagined themselves dealing effectively with obstacles and unanticipated events that create stress.
Visualizing oneself succeeding can raise self-confidence.
Relaxation and energization
Learning to energize when feeling flat, and developing the ability to relax when over-aroused, can help build motivation.
Relaxation and energization techniques can help athletes consistently enter and stay in their optimal energy zone, which is crucial to performing consistently at their peak.
Being either over- or under-aroused hurts athletes' ability to direct their attention to the task at hand. Relaxation and energization techniques help athletes improve their concentration skills.
Learning to purposefully relax when experiencing stress can help athletes manage their emotions. Energizing techniques can be used when athletes feel that low-level stress is preventing them from getting into their ideal mental state for performing.
By learning to control their energy levels through relaxation and energizing, athletes will develop a sense of control, which in turn enhances self-confidence.
Self-talk
Athletes can use self-talk to help motivate themselves.
Self-talk can either raise or lower energy. Athletes can use effective self-talk strategies to reach their ideal mental state before competing.
Focusing on task-relevant cue words can help athletes focus their attention, or regain focus if they are momentarily distracted.
Stress level is strongly influenced by athletes' perceptions and interpretations of events that happen before and during competition. Athletes can use self-talk to develop a positive outlook on events that normally result in elevated stress.
Positive self-talk can be used to raise self-confidence, whereas negative self-talk can lower it.

Case Study

Context

The mental coaching program that is part of this case study was developed by the writer of this dissertation, Miguel Gonçalves. It emerges as a mix of the Mental Coach's admiration for the padel sport and his background studies of Coaching through a certification approved by the International Coaching Federation. Having close contact with professional players in padel and physical training, since January 2023, he found similar mental weaknesses and dedicated his time and energy to helping them. The mental coach was once a mentally poor performer in competition and training, so he empathized with the athlete's difficulties and grabbed the opportunity to make a positive impact in their lives.

Program Structure

The Mental Coaching Program consists of 12 sessions, each one focusing on a different concept of mental performance. This program was heavily based on these books: "The Art of Mental Training", "High-Performance", "The Confident Mind", "The Power of the Subconscious Mind", "The Inner Game of Tennis", "How to be a Stoic", and "Can't Hurt Me". The program was also built with knowledge from certifications: Professional Certified Coach (PCC) by ICF, Practitioner in Neurolinguistic Programming by APPNL, and Psychology for High-Performance Sports by Barça Innovation Hub.

Every athlete is different. Each has different strengths and weaknesses, different rhythms, speeds of reasoning, and background set points. So the Mental Coaching Program is flexible. According to the Course "Psychology for High-Performance Sports" by Barça Innovation Hub, "Psychological Keys in Training and Competition for High Athletic Performance" module, *"The coach must set the frequency, quantity, duration, stress and intensity of training in a way that extends the resource of all his athletes"*.

There are two main conception errors:

1. Rigid planning is when there's no adaptation to the content planned to meet circumstances' needs.
2. Improvisation, the absence of previously planned work programs generates uncertainty, disorientates, and worries athletes.

So the coach adapts the pre-defined sessions to each athlete. The Program can be restructured several times over because the athlete:

- Wants to discuss another mental performance topic that he had contact with recently personally or through others;
- Wants to discuss another topic that happened recently that may influence his mental performance;
- Feels like talking about another session topic because felt that urgency;
- Wants to continue talking about a previous session topic.

Due to these variables. The Mental Coaching Program which is 12 sessions, preferably every week, making it 3 months, usually is extended. There are 12 sessions because the Coach thought of concepts that could be developed in 3 months, the most important concepts that made a difference for him in his athletic experience and based on his education on the topic.
The Mental Coaching Program is successful when the coach and the athlete agree the athlete has achieved all the objectives of the 12 sessions. Sometimes one week of dedicating effort to an assignment is not enough to learn the mental skill, so topics are usually repeated from time to time. The topic can be repeated because the athlete asks to discuss the topic again, or because the coach, based on the coachee's behaviors and communication, thinks the athlete needs to hear again the content of a particular session, extending the time for each topic.

Table 2. The Pre-Defined Program.

Session	Objectives and Resources	Assignments
Introduction and Goal Setting	Creating a safe space - PCC by ICF Getting to know Athlete's Weaknesses - PCC by ICF Understanding what the athlete wants to get from the Program - PCC by ICF Understanding why and how to set Goals - "The art of mental training" p. 121-125 Set goals for the season (competition and practice) - The Coach Understand the difference between Performance and Results. - Psychology for High-Performance Sports Module "Mental Strength in Athletes"	Write a letter for yourself. Imagine you are at the end of the season and you have achieved all your goals, how was this process? When writing be specific about the obstacles you overcame and detail the feelings you've been through. - Zander letter from High-Performance p. 31

Motivation	What is motivation and How does it help us - High-Performance p.68 Different types of motivation - High-Performance p. 53 How to build intrinsic motivation - High-Performance p. 56-58	Why do you do what you do? Why did you choose this sport?
Inner Game	Difference between winning yourself and winning others - “The Discovery of the Two Selves” chapter from The Inner Game of Tennis. How to win yourself - “The Discovery of the Two Selves” chapter from The Inner Game of Tennis. Difference of the two selves inside you - “The Discovery of the Two Selves” chapter from The Inner Game of Tennis. Focus on what you can control - “Some things are in our power, others are not” chapter from “How to be a Stoic”	What is winning yourself for you? Which fears, feelings or other things happen that decrease your performance and enjoyment? Write about it.
Mental Toughness	Why Responsibility Matters? - High-Performance p. 22 - 26 The Responsibility Equation - High-Performance p. 40 Taking Ownership - High-Performance p. 37-39 Why do you want ease instead of hardship? - ”The Impossible Task” chapter from “Can’t Hurt Me” Develop a Growth Mindset and why is it important. - High-Performance p. 134-143	Write down all the things that make you uncomfortable and that you don’t want to do. Especially the things you know that are good for you- Now go do it, and then do it again. - From “The Impossible Task” chapter from Can’t Hurt Me
Visualization	Why is visualization Important? - “Imagineering & Self-Confidence” chapter from The Art of Mental Training How to do it? - “The Critical Three” chapter from The Art of Mental Training Create your visualization - “Your Dream” chapter from The Art of Mental Training	Visualize what we wrote in the session for 5 minutes every day until the next session.
High-performance	Pressure is Mental - Cool under Pressure chapter from The Art of Mental Training Why Failure is Good - “Fear of Failure” chapter from The Art of Mental Training Courage and confrontation - “Controlling Fear” chapter from The Art of Mental Training How to perform at your best - “On Performance Choking” chapter from The Art of Mental Training	Remember you love the pressure and use it to your advantage next competition.

	Be an Authentic Performer - High-Performance p. 258-260	
Self-Confidence	Why is it important? - “The Importance of Self-Belief” chapter from The Art of Mental Training Whether you think you can or not, you are right - High-Performance p. 143-148 Build a Courageous Identity - High-Performance p. 247-258 Manage Confidence - “Too Intense” chapter from The Art of Mental Training	Build a positive and sense of purpose for your practice and think about it during that time. What happened?
Pre-Competition Routines	Why preparation is key - “Prepare to Win” chapter from The Art of Mental Training Three Techniques for Pre-Competition - “Changing your Mental State” chapter from The Art of Mental Training Create your Environment - High-Performance p. 157-164 Creating your Pre-Competition Routine with Anchors - NLP Practitioner	Do your pre-competition routine before every practice this week.
Self-Talk	Benefits of Self-Talk - The Critical Three” chapter from The Art of Mental Training How to do it and not to do it - “The Internal Critic” chapter from The Art of Mental Training Create a Mantra to tell yourself in competition and practice	Tell yourself your Mantra 3x while practicing this week.
Attentional Flexibility	Components, Direction, and Range of Attention - “Mental Strength in Athletes” Module in Psychology for High-Performance Sports External and Internal Distractions - “Mental Strength in Athletes” Module in Psychology for High-Performance Sports Concentration Training - “Mental Strength in Athletes” Module in Psychology for High-Performance Sports	Next Practice, train while distractions are present and try to shift your attention to what is important.
Flow	What is Flow and How to achieve this state - The confident Mind p. 252-259 “Lose your Mind and come to your senses” - The Confident Mind p. 259-276 Be Present - “The Present” chapter from The Art of Mental Training	Practice flow for 1 hour every day until the next session. The secret is in the amount of challenge you set yourself to the amount of skill you have.

Me and Others	Emotional Intelligence - High-Performance p 230-236 Break down analysis of the Video “The Stoic Art of Not Caring What People Think” - By Ryan Holiday	What happenings usually make you lose control of yourself? What does trigger you in practice and competition?

Why this Program Order?

For the Coach it made sense to start with an introduction of the program, creating rapport and connection for the coachee to feel free of judgment and deeply share his experience and opinions. The first session is very important to establish trust, familiarity, and connection. If the Coachee feels comfortable with the Coach, then he would be more open to change and develop better mental skills.

Four studies justify the previous sentence. The "Mere-Exposure Effect", is a psychological phenomenon where individuals tend to develop a preference for something simply because they are familiar with it (Robert Zajonc, The Attitudinal Effects of Mere Exposure,1968). This effect was first demonstrated by Robert Zajonc in the 1960s. It suggests that the more we are exposed to someone, the more we are likely to develop a preference for them, and as a result, we might be more receptive to their ideas or suggestions.

The "Similarity-Attraction Effect" implies that people are more likely to be attracted to and influenced by others who are similar to them, whether in terms of attitudes, beliefs, or background (Abbasi, 2023).

The "Social Judgment Theory" by Muzafer Sherif and Carl Hovland (1962) also touches on this subject. The theory posits that if a message falls within a person's "latitude of acceptance," which is more likely if the person delivering the message is liked or trusted, then the message is more likely to be persuasive.

Lastly, the "Credibility Theory" in communication suggests that speakers who are perceived as trustworthy and have expertise on a topic are more likely to be persuasive (Giffin, 1967). Trustworthiness can be enhanced by familiarity and a sense of shared identity or values, which ties back to being comfortable with the communicator. These theories study the

dynamics of comfort, familiarity, and openness to change in interpersonal interactions and communication.

Still, in the first session, the season objectives are defined. This helps to create a vision, a motivation for the athlete to go after what he proposed. This approach aligns with Locke's goal-setting theory (1981), which accentuates the importance of specific, challenging goals in enhancing performance and motivation. Research supports the idea that written goals, in particular, can significantly increase the likelihood of success. For instance, a study by psychologist Gail Matthews (2007) found that individuals who wrote down their goals were more successful in achieving them compared to those who merely formulated them in their heads.

The next session's order was dependent on what the athlete thought he would need and what the coach thought the athlete needed based on the assessment answers and the first session information.

Session Structure

Each session has also a pre-defined structure. Every athlete is distinct, one might need more time to understand the topic of the session or want to go through a different type of reasoning. So, flexibility is needed in the session as well as in the overall Program. The Coach is not rigid in what the session must be, does not improvise, has planned work, and delivers what the athlete is ready to receive or needs.

There’s a difference between coaching and training. Training, is more instructional and directive, focusing on the development of specific skills or competencies. It involves a more structured approach where the trainer imparts knowledge or skills through teaching, demonstrating, and practicing. Coaching, on the other hand, is challenging the coachee to find their own solutions. It involves a conversational, exploratory process where the coach guides the athlete to self-discovery and self-generated solutions, emphasizing personal growth and self-awareness.

There are six types of questions that the Coach might ask, using the Coaching Method:

- Rapport Building:
    - These questions aim to establish trust and familiarity with the individual. They are light-hearted and tailored to the person's interests or needs. An example could be, "What can I do today to support you?"
- Clarifying:
    - This type of question seeks to ensure mutual understanding by summarizing the individual's statements or seeking further explanation. For instance, "Could you elaborate on what you meant by..."
- Scale:
    - Utilizing a scale question involves assigning value to an answer, helping gauge the intensity or significance of the individual's response. For example, "On a scale of 1 to 10, how confident do you feel about this?"
- Solution-focused:
    - These questions shift the focus from problems to potential solutions. They prompt the individual to consider actionable steps forward. For instance, "What steps can we take to address this challenge?"
- Hypothetical:
    - Hypothetical questions invite individuals to consider alternative scenarios or possibilities. They encourage creative thinking and exploration of different perspectives. An example might be, "What would you do if you were in charge of this project?"
- Open-ended:
    - This type of question encourages deeper reflection and discussion, allowing individuals to express their thoughts and feelings freely. They typically start with words like "What," "Where," "How," "Who," or "When." For instance, "How do you envision overcoming this obstacle?"

This Program is a combination of those two techniques. The Coach starts the session topic by trying the athlete to achieve the solutions by himself. Solutions that might work for the athlete himself. Based on the PCC by ICF certification, if the coach gives the answer before the coachee reflects on it, an opportunity for personal development is withdrawn. One more reason to start the sessions with a coach mindset and not a trainer mindset is the Generation Effect. This psychological phenomenon suggests that information is better remembered if it is

actively generated from one's own mind rather than passively received (Slamecka & Graf, 1978). However, when the coach understands that the athlete is not going anywhere, is in a loop, gets into a solution that contradicts the coach's knowledge of the literature, or asks for resources, the Coach takes the lead and the session turns into training by introducing a topic explaining the theory and giving examples that might resonate with the athlete.

Session's Moments

Sessions, usually, have 5 moments:

1. The Coach asks how was the homework assignment.
2. The Coach asks how was the previous week's training and competition.
3. The Coach introduces the weekly topic of mental performance.
4. The Coachee reflects, shares his experience, and finds his solutions.
5. Both define the Homework Assignment.

These moments do not always happen or have the same duration or sequence from session to session. For example, sometimes the athlete has a lot going on and wants more to feel heard than to think about solutions, or has something significant to share from last week's reflection, last week's happenings, or last week's homework assignment. The athlete chooses what he wants to get from that coaching session, so it is very dependent on the athlete's self-awareness, motivation, and feedback drive. The Coach will deliver what athletes need and are ready to receive. If the athlete felt better or got to a solution for what he wanted at the beginning of the session, then it was a positive session.

Not every session has an assignment, but if defined it should maximum of one, so that athletes do not feel overwhelmed, focus their resources, and increase their value perception of the homework.

Assessment Structure

The coach had the urge to assess the mental capacities of new athletes who were signing up for the program, so to be time-efficient and to make sure he was not missing any important areas of mental development, he asked AI for help. The assessment was created by ChatGPT 3.5, on July 3, 2023, via this prompt:

"Hey, I'm a high performance coach who helps pro-athletes level-up their mental game. I would like to evaluate my athletes through a survey for checking which topics, we should focus on and to measure progress in the meantime. I would like you to give me a template for a google forms that would evaluate all the characteristics of a Tennis professional player. Thanks"

The initial and final assessments are the same to evidence the impact of the mental coaching program. The data was collected via Google Forms. It was sent a link to the athletes and one of their peers to answer the questions online.

It is asked for the name, and age for post-assessment identification. Then, the assessment is divided into four categories:

1. **Mental skills:** Mental Toughness, Confidence, Concentration, Motivation;
2. **Emotion Regulation:** Managing emotions, Resilience, Stress Management;
3. **Pre-game Preparation:** Routine and Rituals, Visualization, Goal-Setting;
4. **Feedback and Self-Reflection:** Receiving Feedback, Self-Reflection.

For each statement of assessment, it is asked for the athlete to rate the statements on a scale of 1 to 5, with 1 being "Strongly Disagree" and 5 being "Strongly Agree". At the end, it is asked for additional comments or concerns.

Table 3. Program Assessments

Category	Sub-Category	Statement
Mental Skills	Mental Toughness	I maintain focus and composure during matches.
		I stay resilient and bounce back from setbacks.
		I handle pressure situations effectively.
	Confidence	I believe in my abilities to perform at a high level.
		I maintain self-belief even in challenging situations.
		I trust my training and preparation.
	Concentration	I can sustain focus for extended periods of time.
		I avoid distractions and stay fully engaged in matches.
		I have good control over my attention during critical moments.
	Motivation	I am driven to improve and reach my full potential.
		I maintain a high level of enthusiasm for the sport.
		I set challenging goals and work towards achieving them.

Emotion Regulation	Managing Emotions	I effectively control my emotions during matches.
		I remain calm and composed under pressure.
		I avoid getting frustrated or angry with myself.
	Resilience	I quickly recover from mistakes or setbacks.
		I bounce back after losing a point or a game.
		I stay mentally strong throughout the match.
	Stress Management	I effectively cope with stress and anxiety.
		I have strategies to stay relaxed and focused.
		I can perform well even in high-pressure situations.
Pre-Game Preparation	Routine and Rituals	I have a pre-game routine that helps me get in the right mindset.
		I use rituals to prepare mentally before matches.
		I have specific strategies to prepare for different opponents.
	Visualization	I visualize myself performing well in matches.
		I imagine different scenarios and prepare accordingly.
		I use mental imagery to enhance my performance.
	Goal-Setting	I set specific and achievable goals for each match.
		I have a clear plan of action to reach my goals.
		I review and adjust my goals regularly.
Feedback and Self-Reflection	Receiving Feedback	I am open to receiving constructive criticism.
		I actively seek feedback to improve my game.
		I use feedback to make adjustments and grow.
	Self-Reflection	I regularly reflect on my performance and identify areas for improvement.
		I analyze my strengths and weaknesses objectively.
		I learn from both wins and losses.
Additional Comments or Concerns		

Program Evaluation

Athletes' Characterization

The two athlete characteristics are described as personal identification information is preserved.

Table 4. Athlete Characteristics.

	Athlete 1	**Athlete 2**
Sport	Padel	Tennis
Level	National	International
Peer	Partner, who watches his games and follows his routines daily.	Tennis Coach, who is dedicated full-time, leading the practices and traveling for tournaments.

Based on the light and one-time analysis of the Assessment made by the Coach, and the introduction made by his Peers, he identified the following weaknesses for each player:

- Athlete 1: Not having goals defined, poor focus skills, unhealthy habits(sleep), not able to adapt to levels of stress and attention, difficulty to self-reflect.
- Athlete 2: Not able to adapt to levels of stress and attention, poor level of self-awareness and self-confidence, unhealthy habits(phone dependency), poor focus and social skills.

Due to divergent athlete needs, the program structure and intensity were adapted. The program intensity of athlete 1 was set to meet one time per week, as pre-defined. Athlete 2 had three sessions per week, caused by his low attributes in the self-reflection sub-category, which requires more time over a week. Moreover, he had a lot of 1's and 2's to develop, and because of his full-time dedication to Tennis, he had time priority for 3 sessions a week.

Athletes' Results

The athlete's results are separated by 8 months, the initial assessments were made in July 2023 and the final in March 2024.

The results of the Mental Coaching Program are the following:

Table 5. Program Results.

Assessment Statement	Athlete 1 Evaluation				Athlete 2 Evaluation			
	Athlete 1		Peer 1		Athlete 2		Peer 2	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
I maintain focus and composure during matches.	3	3	4	4	2	3*	2	2
I stay resilient and bounce back from setbacks.	2	3*	2	2	4	4	3	2**
I handle pressure situations effectively.	2	4*	4	4	2	1**	1	1
I believe in my abilities to perform at a high level.	3	3	4	4	5	4**	1	1
I maintain self-belief even in challenging situations.	2	2	4	2**	5	3**	1	1
I trust my training and preparation.	3	4*	4	4	2	2	2	1**
I can sustain focus for extended periods of time.	2	3*	3	1**	2	3*	2	1**
I avoid distractions and stay fully engaged in matches.	1	2*	5	3**	1	5*	1	2*
I have good control over my attention during critical moments.	2	5*	3	2**	5	5	2	2
I am driven to improve and reach my full potential.	4	2**	5	5	1	3*	3	2**
I maintain a high level of enthusiasm for the sport.	4	2**	5	5	5	5	3	2**
I set challenging goals and work towards achieving them.	4	3**	5	4**	5	5	2	1**
I effectively control my emotions during matches.	2	4*	2	3*	3	1**	3	3
I remain calm and composed under pressure.	2	3*	4	4	5	2**	3	3
I avoid getting frustrated or angry with myself.	2	4*	2	2	5	5	3	3
I quickly recover from mistakes or setbacks.	2	3*	2	3*	4	4	2	3*
I bounce back after losing a point or a game.	3	3	4	3**	4	3**	3	3
I stay mentally strong throughout the match.	3	3	3	3	3	5*	2	2

I effectively cope with stress and anxiety.	2	3*	4	4	1	1	1	1
I have strategies to stay relaxed and focused.	3	4*	3	3	1	2*	1	1
I can perform well even in high-pressure situations.	2	3*	4	5*	4	2**	1	1
I have a pre-game routine that helps me get in the right mindset.	4	5*	4	4	2	4*	2	2
I use rituals to prepare mentally before matches.	3	4*	3	3	1	5*	1	2*
I have specific strategies to prepare for different opponents.	1	1	2	4*	4	4	1	2*
I visualize myself performing well in matches.	4	4	3	3	5	5	2	1**
I imagine different scenarios and prepare accordingly.	3	2**	4	3**	2	2	1	1
I use mental imagery to enhance my performance.	2	3*	3	3	5	5	2	1**
I set specific and achievable goals for each match.	4	4	3	3	5	3**	2	2
I have a clear plan of action to reach my goals.	4	4	2	4*	3	1**	2	2
I review and adjust my goals regularly.	2	2	3	2**	1	4*	2	2
I am open to receiving constructive criticism.	4	5*	5	5	4	5*	2	2
I actively seek feedback to improve my game.	4	2**	5	5	4	4	2	2
I use feedback to make adjustments and grow.	3	4*	4	4	4	4	2	2
I regularly reflect on my performance and identify areas for improvement.	4	5*	5	4**	3	4*	2	2
I analyze my strengths and weaknesses objectively.	4	3**	3	4*	3	4*	2	2
I learn from both wins and losses.	5	2**	3	5*	3	4*	1	2*

* - positive difference compared with initial values,

** - negative difference compared with initial values

Results Analysis

There are various possibilities for the peer and athlete values' difference:

- The athlete answers as a positive difference between the initial and final assessment, and there is a stable or negative difference from the peer, which might suggest insufficient information to assess objectively the topic by the peer while the program driving a positive impact on the athlete's development, or the athlete has pressure to assign a better value just to show that he is improving while not being true, or a negative impact because the coach has sufficient information about the topic to infer those values, or the athlete has a sense of development that has not yet shown exterior results.
- The athlete answered a negative variation between the two assessments and the peer had a positive difference, suggesting that the athlete increased their self-awareness which is positive, and the Mental Coaching program was helpful, or the peer doesn't have all the information to assess objectively the topic.
- The athlete's and peer's value increases might suggest that the athlete developed positive competencies in the Mental Coaching Program. These competencies can be from the placebo effect, or from the value the Program actually delivered.
- The athlete states a negative variation between the two assessments, while a peer's stable or negative difference, might imply that the athlete developed self-awareness or the program had a negative impact.

Athlete 1 Initial vs Final Evaluation Analysis

A total of 19 statements had a positive difference(+24 Points), and 7 statements had a negative difference(-12 Points). In the overall classification which the maximum is 180 Points (36 statements * 5 points for each), athlete 1 had an increase from 104 Points to 116 Points.

The statements that had the more positive results were:

- "I have good control over my attention during critical moments." - 2 to 5 increase, despite the 1-point decrease in the peer assessment from 3 to 2.
- "I effectively control my emotions during matches." - 2 to 4 increase, and his peer agreed with that positive result at the end of the Program with a 1-point increase from 2 to 3.

- “I avoid getting frustrated or angry with myself.” - 2 to 4 increase, while his peer maintained the value of 2 over the program.
- “I handle pressure situations effectively.” - 2 to 4 increase, meeting his peer's initial and final value of 4. This change was either development from the athlete that his peer didn’t have the information initially or the athlete became more self-aware.

The statements that had the more negative results were:

- “I learn from both wins and losses” - 5 to 2 decrease. When asked, the athlete justified he now doesn’t learn much about wins and takes more insights from self-reflection when losing.
- “I actively seek feedback to improve my game.”; “I am driven to improve and reach my full potential.”; “I maintain a high level of enthusiasm for the sport.” - 4 to 2 decrease, even with the stable 5-point value estimated by his peer. When asked, the athlete said that these three statements were affected by his feeling of low motivation and the fact that from now(the time he did the final assessment) he is dedicating his time to being a great coach rather than a great player.

Peer 1 Initial vs Final Evaluation Analysis

A total of 7 statements had a positive difference(+10 Points), and 9 statements had a negative difference(-12 Points). According to his Peer, athlete 1 had a 2-point decrease from 128 Points to 126 Points.

The statements that had the more positive results were:

- “I learn from both wins and losses.” - 3 to 5 increase. Even when the athlete believed he had a 5 to 2 decrease. Concluding that Athlete 1 and his peer disagree about his self-reflection practices.
- “I have specific strategies to prepare for different opponents.” - 2 to 4 increase. However, the athlete doesn’t believe that it’s important to have different strategies against different opponents. When asked about it, he said that this statement made sense in technical and tactical terms but not mentally; and that he rarely knew his opponents before the match.
- “I have a clear plan of action to reach my goals.” - 2 to 4 increase. The athlete assessed himself with a value of 4 in both evaluations.

The statements that had the more negative results were:

- “I can sustain focus for extended periods of time.” - 3 to 1 decrease. On the Athlete’s final assessment, he gave a 3, increasing one point from the beginning of the process.
- “I avoid distractions and stay fully engaged in matches.” - 5 to 3. On the Athlete’s final assessment, he gave a 2, increasing one point from the beginning of the process. Concluding that the Athlete and his peer disagree on his new focus abilities.
- “I maintain self-belief even in challenging situations.” - 4 to 2 decrease. On the Athlete’s final assessment, he gave a 2, maintaining the value from the beginning of the process.

Athlete 2 Initial vs Final Evaluation Analysis

A total of 13 statements had a positive difference(+24 Points), and 9 statements had a negative difference(-16 Points). In the overall classification which the maximum is 180 Points (36 statements * 5 points for each), Athlete 2 had an increase from 118 Points to 126 Points.

The statements that had the most positive results were:

- “I avoid distractions and stay fully engaged in matches.”; “I use rituals to prepare mentally before matches.” - 1 to 5 increase, positively matching the 1-point increase in the peer assessment from 1 to 2.
- “I review and adjust my goals regularly.” - 1 to 4 increase, while a 2-point stable value from his peer.
- “I have a pre-game routine that helps me get in the right mindset.” - 2 to 4 increase, while a 2-point stable value from his peer.
- “I stay mentally strong throughout the match.” - 3 to 5 increase, while a 2-point stable value from his peer.
- “I am driven to improve and reach my full potential.” - 1 to 3 increase, while a 3 to 2 decrease from the peer assessment.

The statements that had the most negative results were:

- “I remain calm and composed under pressure.” 5 to 2, while a 3-point stable value from his peer.
- “I set specific and achievable goals for each match.” - 5 to 3, while a 2-point stable value from his peer.

- “I maintain self-belief even in challenging situations.” - 5 to 3, while a 1-point stable value from his peer.
- “I can perform well even in high-pressure situations.” - 4 to 2, while a 1-point stable value from his peer.
- “I have a clear plan of action to reach my goals.” - 3 to 1, while a 2-point stable value from his peer.
- “I effectively control my emotions during matches.” - 3 to 1, while a 3-point stable value from his peer.

These lower values suggest a sign of an increase in self-awareness of the athlete’s actual competencies.

Peer 2 Initial vs Final Evaluation Analysis

A total of 5 statements had a positive difference(+5 Points), and 8 statements had a negative difference(-8 Points). According to his Peer, Athlete 2 had a 3-point decrease from 68 Points to 65 Points. Athlete 2’s Peer had no significant changes in his statements, only with 1-point differences between the initial and final assessment statements.

The positive difference statements were:

- “I avoid distractions and stay fully engaged in matches.”; “I use rituals to prepare mentally before matches.” - 1 to 2 increase. While an increase of 1 to 5 was evaluated by the athlete.
- “I quickly recover from mistakes or setbacks.” - 2 to 3 increase. While the athlete maintains a stable 4-point scale evaluation.
- “I have specific strategies to prepare for different opponents.” - 1 to 2 increase. While the athlete maintains a stable 4-point scale evaluation.
- “I learn from both wins and losses.” - 1 to 2 increase. While an increase of 3 to 4 was evaluated by the athlete.

The negative difference statements were:

- “I stay resilient and bounce back from setbacks." - 3 to 2 decrease. Even, with a 4-point stable value from the athlete.
- "I trust my training and preparation.” - 2 to 1 decrease. Even, with a 2-point stable value from the athlete.

- “I can sustain focus for extended periods of time.” - 3 to 2 decrease. When the athlete evaluated himself as increasing from a 2 to a 3.
- “I am driven to improve and reach my full potential.” - 3 to 2 decrease. When the athlete evaluated himself as increasing from a 1 to a 3.
- “I maintain a high level of enthusiasm for the sport.” - 2 to 1 decrease. Even, with a 5-point stable value from the athlete.
- “I set challenging goals and work towards achieving them.”; “I visualize myself performing well in matches.”; “I use mental imagery to enhance my performance.” - 2 to 1 decrease. Even, with a 5-point stable value from the athlete.

All the positive differences evaluated by his peer were also evaluated positively by the athlete. These results might suggest a low level of self-awareness and blind positivity and confidence; Confidence that unfortunately when competing fades.

Difficulties from the Coach Perspective

Some difficulties that the Coach incurred during the Mental Coaching Program were:

- Athletes might be lying, and if not confirmed with another athlete’s peer the Coach does not know the reality. Usually, that’s a limitation if athletes are not serious about their development;
- Suspects that the Athleteis lying when receiving contrary information from peers, and it’s difficult to create/maintain rapport;
- The athlete doesn´t commit to weekly objectives, the Coach doesn’t feel trusted with his work;
- The athlete starts to fidget or look at the phone in session, showing that do not want to be in the session and it demotivates the coach;
- The athlete skips physical training and sports practice, making the Coach rethink if they seriously want to achieve the goals they set.

Athlete 1 likes to say that has a mental coach because makes him feel good that somebody is believing in him. He did not want to try visualization techniques neither breathwork nor meditation. Athlete 1 did one writing homework in 8 months of continued work, the Coach stopped believing in him and his objectives.

When the Coach confronted athlete 2 with his lies, the athlete would always have another justification, when it was clear that his peer saw one situation and he was telling the Coach the opposite. Athlete 2 faked small injuries when the competition was close for not being able to play; does not answer the messages or calls of his Mental Coach for weeks sometimes, Cancels sessions with 30-minute notice, and when in session is not focused on the call topic. While via video call from the phone, he goes to another app and loses concentration on the session. Has a lot of difficulties making commitments, and the Mental Coach never knows if he is going to show up in session and how much time he has (even when the session is scheduled for one hour), the athlete would come with "once-a-time justifications" on how he needs to go in 20 min… Well, he auto-sabotajes himself which totally impacts the positive effect that the Mental Coaching Program would have. Athlete 2 only did two homework tasks, from all the sessions over the last 8 months.

The Mental Coaching Program does not guarantee results when the athletes pay to sign up. Some things can not be bought, they must be earned. Reflection, Objectives, and Talking about Mental Training topics without action, commitment, and drive have low to no impact. The Coach talked about the low commitment issue and challenged them to inspire a new mindset and actions, however, their behaviors did not change. The coach can do his best but if the athlete does not act, then results will not happen.

Teaching Note

Theme 1: On Coach Difficulties and Session Improvements

Q1. How can the Coach deal with his previous difficulties?

Recap:

The Coach's difficulties were:

- No drive to improve from the athletes;
- No commitment or action towards mental objectives and assignments;
- No perceived value to the Mental Coaching session;
- No trust in the Mental Coaching Program.

Teaching Note:

Some athletes' motivation to have mental coaching is that they can say they have a mental coach. So, the first adjustment the Coach should make is to define specific requirements to filter athletes. Those requirements should be:

- Drive to become better;
- Transparency and truthfulness in the program;
- Commitment to weekly action of the assignments;
- Respect the Coach during the program;
- The athlete has the belief that he was made for big accomplishments.

Putting these requirements into practice, the Coach will end up with the athletes who would actually benefit from the Mental Coaching Program.

In order to guarantee trust and commitment from the athlete over the Program, the Coach should develop a contract where the responsibilities of each other are written, and both sign the document before starting the process. The responsibilities of the Athlete are commitment to assignments and the sessions, being on time for the sessions, transparency, and truthfulness over the program, and doing his best to develop his mental skills. The responsibilities of the Coach are being on time for the sessions, believing in the athlete's capacities and potential,

motivating and challenging the athlete for his effective development, be committed to using all of his knowledge, abilities, and resources to make the player successful and promote an atmosphere of teamwork, mutual respect, and commitment.

If any of these requirements or responsibilities are compromised in the Program, the Coach should give one more opportunity, and after he should end the process. Showing the athlete that the Mental Coach is part of the team and that he is accountable to him, will increase pressure on the Athlete to be more accountable for action and then to drive positive results (Rashid, 2015).

The Coach should have a solid and defined coaching philosophy. This, way the athletes know what the coach values and stands for, so if the athlete holds different values from the Coach, perhaps it's not the right match, and that's ok (Smith, 2019). A coaching philosophy is heavily influenced by the coach's philosophy of life (Martens, 1987). Lynn Kidman and Stephanie Hanrahan in "The Coaching Process" book (1997) state that the coach's personal beliefs, values, principles, and priorities, guide how athletes experience success or failure.

According to Smith (2019), the Coach should answer the following questions for understanding his coaching philosophy:

- Why do I want to coach?
- Why do I think athletes (or any athlete) want me to coach them?
- What do I want athletes to achieve?
- What do I want to achieve as a coach?
- What values do I want the athletes to acquire?
- How do I judge success?

<u>Q2. There are a lot of grey areas in Coaching and Training - how and in which situations should the Coach be flexible?</u>

Recap:

The Coach started with a Coaching approach, appealing to the self-reflection skills of athletes. That is challenging them to identify the solution to their problems. If the solution the coachee got contradicts the Coach's knowledge about the topic, or the Coach feels like the Athlete might benefit from the new information needed to achieve some solution, he introduces the

topic of the session by explaining the theory and giving examples that might resonate with the athlete.

Teaching Note:

The coach should set rules for his practice to ensure the program's efficiency. According to previous difficulties when dealing with athletes, the amount of flexibility should vary from situation to situation, and not from athlete to athlete. It's ok for the athlete to be late with a reasonable justification, but not ok for the athlete to not do or try the best on the last session's assignment, that's a sign of low commitment so there will be a maximum of 2 warnings before the athlete is invited to leave the program. It's ok for the athlete to be tired and to muddly reflect, however, it's not ok for an athlete to not be invested in the session or unfocused, the session should stop there. It's ok if the athlete doesn't remember something, it's not ok to lie about it if the Mental Coach discovers he should confront the athlete and warn him. The Coach should be flexible according to his own coaching philosophy.

Q3. Suggestions on ways for the Coach to know which topics are being utilized by athletes?

Recap:

The topic can be repeated because the athlete asks to discuss the topic again, or because the coach, based on the coachee's behaviors and communication, thinks the athlete needs to hear again the content of a particular session.

Teaching Note:

The Coach should keep a record of what was talked about in the session, and have a metric that assesses the Athlete's Utilization of that specific session.

The Utilization Coefficient is based on the Coach's perception of the athlete's openness to the topic, intentional action post-session, and results. If the Coefficient is less or equal to 5 out of 10 then the Coach should repeat the session contents. If it was done for these two athletes, with the case study program structure, it would have the following structure.

Table 6. Utilization Coefficient by session.

Session Topic	Utilization Coefficient	
	Athlete 1	Athlete 2
Introduction and Goal Setting	4	1
Motivation	2	1
Inner Game	7	7
Mental Toughness	-	8
Visualization	1	7
High-performance	-	3
Self-Confidence	-	7
Pre-Competition Routines	4	3
Self-Talk	7	-
Attentional Flexibility	8	2
Flow	6	5
Me and Others	-	5

Theme 2: Assessment and Program Limitations

Q1. What are the main limitations you can identify in the methodology used to run a proper needs assessment?

Firstly, the session's order was dependent on what the athlete thought he would need at the moment and with few or no plans following that. The pre-defined program was being used as a backlog for the athlete's needs. The Coach should evaluate thoroughly the initial and following assessments, and define a weakness metric to intentionally and objectively prioritize sessions for the athlete's development. One suggestion could be to identify as a weakness a parameter in the assessment that:

- Has an average (between the peer and the athlete evaluation value) of below 3 out of 5;
- Has the value 1 on the peer assessment (due to potential athlete's low self-awareness).

Table 7. Athlete's 1 weaknesses.

Sub-Category	Statement	Individual Evaluation	Peer Evaluation
Mental Toughness	I stay resilient and bounce back from setbacks.	2	2
Concentration	I can sustain focus for extended periods of time.	2	3
Concentration	I have good control over my attention during critical moments.	2	3
Managing Emotions	I effectively control my emotions during matches.	2	2
Managing Emotions	I avoid getting frustrated or angry with myself.	2	2
Routine and Rituals	I have specific strategies to prepare for different opponents.	1	2
Visualization	I use mental imagery to enhance my performance.	2	3
Goal Setting	I review and adjust my goals regularly.	2	3

Table 8. Athlete's 2 weaknesses.

Sub-Category	Statement	Individual Evaluation	Peer Evaluation
Mental Toughness	I maintain focus and composure during matches.	2	2
Mental Toughness	I handle pressure situations effectively.	2	1
Confidence	I believe in my abilities to perform at a high level.	5	1
Confidence	I maintain self-belief even in challenging situations.	5	1
Confidence	I trust my training and preparation.	2	2
Concentration	I can sustain focus for extended periods of time.	2	2
Concentration	I avoid distractions and stay fully engaged in matches.	1	1
Motivation	I am driven to improve and reach my full potential.	1	3
Resilience	I stay mentally strong throughout the match.	3	2
Stress Management	I effectively cope with stress and anxiety.	1	1
Stress Management	I have strategies to stay relaxed and focused.	1	1
Stress Management	I can perform well even in high-pressure situations.	4	1
Routine and Rituals	I have a pre-game routine that helps me get in the right mindset.	2	2
Routine and Rituals	I use rituals to prepare mentally before matches.	1	1

Routine and Rituals	I have specific strategies to prepare for different opponents.	4	1
Visualization	I imagine different scenarios and prepare accordingly.	2	1
Goal Setting	I have a clear plan of action to reach my goals.	3	2
Goal Setting	I review and adjust my goals regularly.	1	2
Self-Reflection	I regularly reflect on my performance and identify areas for improvement.	3	2
Self-Reflection	I analyze my strengths and weaknesses objectively.	3	2
Self-Reflection	I learn from both wins and losses.	3	1

For example, in athlete 2 answers, it's spotted a pattern of low self-awareness or difficulty in admitting weaknesses. In the two statements: "I believe in my abilities to perform at a high level."; "I maintain self-belief even in challenging situations.", athlete 2 set a 5-point value and his coach a 1. If the Parameter "Has the value 1 on the peer assessment" was not set then it wouldn't be weaknesses meaning an average of 3 in the 5-scale point. Also, in these two statements: "I can perform well even in high-pressure situations."; "I have specific strategies to prepare for different opponents.", athlete 2 set a 4-point value and his coach a 1, confirming the potential low-self awareness or difficulty in admitting his weaknesses.

In the initial assessment, the Coach should do a peer and athlete evaluation analysis with the following questions in mind for better program delivery and personalization:

- What can he learn not only from the values of each statement but also, from the disparity between both parties?
- Does the disparity have any meaning?
- How would it affect the personalization of the Program?

In this example, the Program structure for athlete 1, would be more focused on Concentration and Managing Emotions, due to more weaknesses in those sub-categories, with no significant disparity between the athlete's and peer's values (1 point difference in every weakness). The Program structure for athlete 2, would be centered on Stress Management, Routine and Rituals, and Self-Reflection, due to more weaknesses and significant disparity between the athlete and coach (with a maximum of a 4-point discrepancy) on these sub-categories.

Then, regarding the personalization of the program, the assessment should first clearly point out the sessions that might drive more results for the athlete, based on the identified weaknesses. The Coach should focus on the sessions that are related to those sub-category weaknesses, this way he is intentionally and objectively prioritizing sessions for the development of the athlete.

Table 9. Assessment Sub-Category and Program Sessions

Assessment Sub-Category	**Related Session(s)**
Mental Toughness	Mental Toughness
Confidence	Self-Confidence Self-Talk
Concentration	Attentional Flexibility Flow
Motivation	Motivation
Managing Emotions	High-Performance Me and Others
Resilience	High-Performance Inner Game Mental Toughness
Stress Management	Me and Others High-Performance
Routine and Rituals	Pre-Competition Routines
Visualization	Visualization
Goal-Setting	Introduction and Goal Setting
Receiving Feedback	High-Performance
Self-Reflection	High-Performance

Regarding the frequency of the assessment, the time between athlete's evaluations was too extended. The Coach couldn't make effective adjustments to the program, because he had no overall feedback about the athlete's development or regression. With this in mind, the assessment should be done every month for the Coach to be able to adapt the program to the athlete's needs. This way, athlete improvement is evaluated thoroughgoing. When implemented, feedback should be given to the athlete about his weaknesses development and which are now strengths. A strength is defined as the average between the athlete's and peer's value being greater than 3 on a 5-point scale.

Regarding, the number of peers and answer validation. While the athlete's partner knows about some topics of the athlete's life, the sports coach knows others. The Mental Coach should ask the athlete who is best capable of assessing his development on a determined category. Then the Mental Coach should send the peer assessment to the defined person. That peer is responsible for doing a monthly evaluation about some of the athlete's categories, and the peer is the source of truth on the athlete's improvement or regression on its topics of expertise, as Marshall Goldsmith's (2007) coaching program. So, as a change for the better the Mental Coaching Program should have more than 1 peer, and peers that are fully capable of assessing the athlete in the determined topics. Peers that are chosen by the athlete, which is a bias already per se, because the athlete can self-sabotage himself. However, the athlete who wants to improve, now a program requirement, will likely not self-sabotage.

Regarding the confusing, vague, and sometimes repetitive; the chatgpt-based evaluation that was not validated by research; and no research to back up the questionnaire topics, according to the "Sports Psychology for Coaches" book from Damon Burton, Ph.D. and Thomas D. Raedeke, Ph.D., there are four Mental Training Tools: Goal-Setting, Imagery, Relaxation and Energization, and Self-Talk and five Mental Skills: Motivation, Energy Management, Attention, Stress Management, and Self-Confidence. Both, Mental Training Tools and Mental Skills can be developed so they should be based on the assessment.

In order to differentiate the better mentally skilled athletes, and to provide evidence on the efficacy of the MST program, there are a considerable amount of instruments targeting mental skills and tools in sport. Such instruments, with solid validation to be of any theoretical or practical value, are, the Psychological Skills Inventory for Sport (PSIS, Mahoney, Gabriel, & Perkins, 1987); the Athletic Coping Skills Inventory (ACSI-28, Smith, Schutz, Smoll, & Ptacek, 1995); the Test of Performance Strategies (TOPS, Thomas, Murphy, & Hardy, 1999); and the Ottawa Mental Skills Assessment Tool (OMSAT-3, Durand-Bush, Salmela, & Green-Demers, 2001).
Professor Hardy (2010), revisited the Test of Performance Strategies and made a second version with a more accurate scale validation. TOPS 2 evaluates the following variables: Self-talk, Emotional Control, Automaticity, Goal-Setting, Imagery, Activation, Relaxation, Negative Thinking, Distractibility, and Attentional Control. The assessment is divided into two parts Competition and Practice with different components assessed.

The nature of one's self-talk, whether positive or negative is a crucial determinant of athletic behavior (Hardy et al., 1996a).

Smith et al. (1995) identified "copying with adversity" and Thomas and Over (1994) found that managing "negative emotions and cognitions" was an important factor in successful athletic performance, so Emotional Control was added to the assessment.

Automaticity emerged from the studies of Thomas and Over, 1994 and Hardy et all, 1996a. It is defined also as "autonomous" (Fitts and Posner, 1967), "Procedural" (Anderson, 1982), "automatic" (Schneider and Shiffrin, 1977), or the capacity to perform at a high level while not thinking about what one is doing, known as the theory of "flow" from Csikszentmihalyi's (1990). The technique of goal setting is related to increased athletic achievement (Burton, 1992; Hardy et all, 1996a).

Imagery is widely acknowledged by various studies as a main mental skill in sports performance (Vealey, 1988; Murphy and Jowdy, 1992; Hardy et al.,1996a).

Arousal control is identified as an important psychological skill in various resources reviewed. (Hardy, 1990; Hardy and Parfitt, 1991) suggest that Relaxation(lowering) and Activation(raising) are two different skills.

Negative thinking while performing can also be detrimental to the activity and create unproductive stress (Hardy, 1996).

A number of new items were developed, constructing the distractibility category, which was introduced in TOPS 2 to address the problems identified.

Attentional Control is a major element in cognitive sports psychology (Jones, 1990; Boutcher, 1992; Hardy et al., 1996a; Nideffer and Sagal, 1998).

Motivation and self-confidence are not in the assessment, however, Bandura (1977) theorizes that the primary abilities (goal-setting, imagery, relaxation, and self-talk) that are used to develop them identify them in the assessment. Interactive or social variables such as teamwork, coachability, and interpersonal skills were excluded to focus on the more generic factors of performance in the TOPS. (Hardy, 1999)

To correctly complete the TOPS 2 assessment, athletes should use a 5-point scale (1=never; 2=rarely; 3=sometimes; 4=often; 5=always). Here are the two assessments, Competition and Practice, according to (Hardy, 2010):

Table 10. Competition Assessment

Self-talk	Talk positively to get the most out of competitions
	Manage self-talk effectively
	Say things to help competitive performance
	Say specific cue words or phrases to help performance
Emotional Control	Emotions get out of control under pressure
	Difficulty with emotions at competitions
	Difficulty controlling emotions if I make a mistake
	Emotions keep me from performing my best
Automaticity	Able to trust my body to perform skills
	Sufficiently prepared to perform on automatic pilot
	Allow whole skill or movement to happen naturally without concentrating on each part
	Unable to perform skills without consciously thinking
Goal Setting	Set personal performance goals
	Set very specific goals
	Evaluate whether I achieve competition goals
	Set specific result goals
Imagery	Rehearse performance in my mind
	Imagine competitive routine before I do it
	Rehearse the feel of performance in my imagination
	Visualize competition going exactly the way I want it
Activation	Can get myself “up” if I feel flat
	Can psych myself to perform well
	Can get my intensity levels just right
	Can get myself ready to perform
Relaxation	Use relaxation techniques to improve performance
	Use relaxation strategies as a coping strategy
	If I’m starting to “lose it”, I use a relaxation technique
	Relax myself to get ready to perform
Negative Thinking	Keep my thoughts positive
	Self-talk is negative

	Thoughts of failure
	Imagine screwing up
Distractibility	Visual distractions would affect my performance
	Environmental conditions affect my performance
	My performance would be impaired by sleep loss
	Loud noises would not affect my performance

Table 11. Practice Assessment

Self-talk	Motivate myself to train through positive self-talk
	Talk positively to get the most out of practice
	Manage self-talk effectively
	Say things to myself to help my practice performance
Emotional Control	Trouble controlling emotions when things are not going well
	Performance suffers when something upsets me
	Emotions keep me from performing my best
	Frustrated and emotionally upset when practice does not go well
Automaticity	Able to perform skills without consciously thinking
	Perform automatically without having to consciously control each movement
	Allow whole skill or movement to happen naturally without concentrating on each part
	Monitor all the details of each move to successfully execute skills
Goal Setting	Very specific goals
	Set goals to help me use practice time effectively
	Set realistic but challenging goals
	Don’t set goals for practices, just go out and do it
Imagery	When I visualize my performance, I imagine what it will feel like
	When I visualize my performance, I imagine watching myself as if on a video replay
	Rehearse my performance in my mind
	Visualize successful past performances
Activation	Can get my intensity levels just right
	Can get myself “up” if I feel flat

	Can psych myself to perform well
	I have difficulty getting into an ideal performance state
Relaxation	I use relaxation techniques to improve my performance
	Use practice time to work on relaxation techniques
	Practice using relaxation techniques at workouts
	I use workouts to practice relaxing
Attentional Control	Able to control distracting thoughts when training
	Focus attention effectively
	Trouble maintaining concentration during long practices
	Attention wanders while training

Q2. What are the main Program Structure strengths and limitations?

One strength was that the session was a safe space and a time for the athletes to share their problems and try to find solutions, applying the coaching technique. However, some athletes with low self-reflection skills would find this time very stressful and it was difficult for them to engage in some sort of depth of thought, it was a very energy-consuming activity with low perceived value. Athletes would want the answers right away, but then the answers would not have the same level of importance, because there was no effort in trying to get there or thought about it or the problem wasn't significant enough for them. According to the Ikea Effect, research from Michael I. Norton (2012), effort increases value perception. So, for this technique to be qualified as a strength in the program, the athlete must be prepared for introspection and with a problem-solving mindset.

Despite the deficient attitude from the athletes, the topics targeted were aligned with research studies. However, the concepts were based on practical books and courses that did not refer to the Mental Skills Training approach presented in the sports psychology literature. The program would benefit from some parts of a MST, so the following topics should be included: Goal-Setting, Imagery, Relaxation and Energization, Self-Talk, Motivation, Energy Management, Attention, Stress Management, Self-Confidence, and Mental Plans. A program suggestion can be found in Professor Burton's research (2008):

Table 12. Program Suggestion by Burton (2008).

Topic	**Objectives**
Goal-Setting	What Are Goals and Why Use Them? Characteristics of Effective Goals Making Goals Work: The Goal Implementation Process Developing Athletes' Goal-Setting Skills
Imagery	What Is Imagery? Factors Influencing the Effectiveness of Imagery Using Imagery Effectively Developing an Imagery Training Program
Relaxation and Energization	What Is Relaxation? Relaxation Strategies What Is Energization? Energization Strategies Developing Athletes' Relaxation and Energization Skills
Self-Talk	What Is Self-Talk? How Self-Talk Works Positive Versus Negative Thinking Optimizing Self-Talk Developing Athletes' Smart-Talk Skills
Motivation	What Is Motivation? Athletes' Needs and Intrinsic Motivation Impact of Rewards Handling Success and Failure Creating a Mastery-Oriented Motivational Atmosphere
Energy Management	Understanding Energy Management How Does Arousal Affect Performance? Why Underarousal and Overarousal Impair Performance Determining Optimal Energy Zones Mental Side of Arousal

	Developing Athletes' Energy Management Skills
Attention	Understanding Attention Attentional Capacity Selective Attention Sustaining Focus: Concentration Implementing an Attentional Skills Program
Stress Management	Understanding Stress Stress Management Developing Athletes' Stress Management Skills
Self-Confidence	Understanding Self-Confidence Developing and Maintaining Self-Confidence During Competition Self-Fulfilling Prophecy Developing Athletes' Self-Confidence
Mental Plans	Understanding Mental Plans Types of Mental Plans Roles of Triggers, Releases, and Cues Words Developing a Mental Plan

According to Burton and Raedeke (2008, p.230), to build a successful MST, first, the Coach should buy into the following tenets:

- *"Sport is a test of athletes' physical and mental skills, and learning to master both the physical and mental game is the best way to maximize competitors' chances of success."*
- *"The mental skills needed for success in sport and life can be learned through systematic practice."*
- *"Self-awareness is the first step toward learning to master the mental game."*
- *"Coaches need to help athletes take personal responsibility for their actions."*
- *"Athletes can't always control what happens to them, but they can control how they respond to difficult or untimely events."*
- *"Mental skills training is a systematic process for developing important mental training tools, skills, and plans."*

A MST is divided into 3 phases: Education, Acquisition, and Implementation.

The Education phase has two objectives: to provide an overall education about mental training tools, skills, and plans that the program is developed upon; and to increase self-awareness in

athletes about their strengths and weaknesses of their mental skill; Consequently, the accuracy of the acquisition and implementation strategies will be higher (Burton and Raedeke, 2008). The Coach should conclude this phase by handing out the initial mental skills assessment, TOPS 2. By enhancing the athletes' knowledge of sports psychology, the Coach can motivate them to acquire essential mental training tools, skills, and plans.

In the acquisition phase, the initial part of the sessions should be focused on educating athletes about the tool and giving them a chance to assess their skills in that area. In the remaining time, the coach should aim for athletes to acquire and automate these tools, through three or four basic exercises or drills, which should be sequenced to increase the level of complexity with time. These drills should be also applied to the mental skills and plans that follow.

The implementation phase is the final step of implementing athlete acquisitions in various types of situations, for example, when stress or fatigue is present. A successfully implemented strategy means that one positive action was automatically triggered on a possible disturbing happening and the athlete can create, regain, or maintain the flow state.

Mental skills, like physical skills, don't develop from day to night, so patience is fundamental. The coach should practice the program for a full season to realistically evaluate its effectiveness, while regularly self-monitoring to assess progress and identify areas to modify (Burton and Raedeke, 2008). Developing all four tools, five skills, and three mental plans in a season can be optimistic, it is recommended a staggered approach, so what is implemented is done correctly and can be "overlearned" as Burton (2008) guides, meaning athletes will be emerged in a topic for two weeks and going through education, acquisition and implementation on each one at a time before introducing a new skill, tool or plan. *"Development is more effective when athletes have an opportunity to concentrate on the tool or targeted skill, the athlete should do enough focused practice to acquire and begin to automate it, and learn through practical experience how it can benefit their performance—and only then move on to the next technique."* (Burton and Raedeke, 2008, p.240).

Professor Burton (2008) recommends that the tools in the program should be sequenced according to the athlete's perception of importance. Following the development of all four

mental training tools, the Coach should focus on one or two of the mental skills spotted in the assessment, if not clear where to start, confidence and concentration are great choices (Burton and Raedeke, 2008). Then, the coach should focus on helping athletes develop a mental plan, so they can integrate the strategies learned until the moment and execute a sequence of tools to enhance performance. Professor Burton (2008) suggests building either a preparation or a performance mental plan first. Mental plans can be of three kinds, Preparation plans, to attain a flow mindset; Performance Plans, to maintain a flow mindset; and Recovery plans, to regain a flow mindset. With these, athletes can maintain consistency in performances, putting the mental tools needed for each situation. Athletes should have their mental plans written, with the tools that they will use to create a flow mindset and their sequence should be easy to follow. It is recommended that at the end of the athlete's season, the Coach should audit the MST program to monitor the athlete's progress, through the same assessment TOPS 2 used initially, observation, and interviews. This way, the Coach can plan how to adjust the MST program to maximize athlete development and skill expansion.

It is the athlete's responsibility to practice the mental training tools, skills, and plans, also known as individual MST practice. However, the Coach can help this practice in session through simulation training. The coach should incentivize athletes to take MST outside of sessions, splitting their individual practice into automating mental training tools, skills, and plans; and to apply those strategies under stressful situations in their sports competition or practice. The coach should be creative in designing simulations, and be patient in helping athletes learn to use mental techniques to handle these situations.

The MST program, following a systematic approach and Burton and Raedeke's (2008) suggestions, should include 10-20 min weekly or semiweekly sessions where the benefits to individual or team performance from a topic (e.g., imagery) are discussed. Between sessions, the Coach should assign homework with the purpose of enhancing understanding and promoting skill development (Burton and Raedeke, 2008). Knowing that self-reflection is also important, the coach should also dedicate 10 - 20 min per week to the development of this skill. If the athlete does one session per week, then the Coach should combine those 10 - 20 mins of training with another block of 10 - 20 min for self-reflection skill development. So, the session would be 20 - 40 minutes, divided into two blocks: training and coaching.

With these research-based suggestions, the program developed by the Coach would have more clear, specific, and measurable objectives and would follow a plan that is concretely aligned with the objectives and athlete weaknesses.

Conclusion

The objective of this dissertation was to evaluate the effectiveness of a Mental Coaching Program in padel and tennis athletes. The case study portrays the program's and session's structure as well as the evaluation method used on the athletes while describing the coach's delivery pain points. The teaching note details the improvements and limitations of the program with a literature background.

The concern with the quality of these programs is not a question of "all or nothing" but rather a question of "detail" and how these details are articulated. Even though the initial program is not substantially distinct from what is recommended by the literature, the session timings (weekly or bi-weekly, not tri-weekly), session structure (adding more practice of mental skills, tools, and plans in session), and program timing (for a season instead of 8 months), there are significant details that would benefit to be in an upgraded and more accurate version, such as developing a more solid coaching philosophy, defining initial athlete requisites, and use a better assessment and monitoring method.

To conclude, every MST will be differently delivered from coach to coach, and differently received from athlete to athlete. There's no overall perfect and defined MST as default. For mental coaching to be useful and accurate, the athlete must have the drive, the coach must have the principles of an impactful MST, and the flexibility to adapt on what he should adapt (without compromising the skills the athlete is working on), while with a strong coaching philosophy matching his values, beliefs, and purpose.

Limitations

One limitation of the study was that the Mental coach wrote the case study at the end of the Mental Coaching program while investigating the literature, so there was an exercise of constant conflict between describing what was delivered vs describing what was supposed to be delivered in the program. The coach has done the writing while embracing his faults with a growth mindset, and an exercise of seeking feedback for professional practice.

When individuals disassociate their value with the fact of being right, that is when significant growth happens, this writing serves as an example for athletes who want to become better, but for that, they need to accept what is not right first.

The Mental Coaching Program's impact is arduous to estimate due to the diminutive, and maybe not representative, two athletes' sample. Nevertheless, the discussion about the methods and techniques used might benefit other mental coaches, sports psychologists, or sports coaches.

Future studies

As a proposal to continue this investigation, it could be interesting to study the effectiveness of the upgraded MST for a season. The study would have more than two athletes, and the evaluation would consist of two types of assessments, the TOPS 2 self-assessment, and a peer assessment which categories and the person responsible to evaluate concretely are defined by the athlete at the start of the program. These assessments would be done once a month, during a season. Coaching and training techniques will be used, however with a more focus on training athletes with various mental skills, tools, and plans. Weekly or bi-weekly sessions would be between 20 to 40 minutes, in-person or online, depending on the athlete's availability. The athletes must meet the prerequisites to enroll in the program. This way, there's a more consistent study to confirm the suggestions discussed in the teaching note.

As an additional idea for further studies, coaches have expectations for the athlete development, however, sometimes they are not met and the coach might question "Until when should the coach believe in the athlete's growth?"; "When and why should an MST end?"; "Should the coaches' belief in their athletes be positively blind and constant? Does it help the athlete to be that way?". Answering these questions would help Mental Coaches know when it is time to allocate their resources to another athlete's development and create a more positive impact.

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