

Mental skills training in elite sports environments: Current status of integration

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ABSTRACT

The role of mental skills training (MST) in elite sports is continually growing in prominence as several studies have emphasized its value to athletes and coaches for several years. Fewer studies have investigated how MST might successfully be integrated into elite sports franchises, clubs, and teams. This study examined the current status of MST integration in these environments. It also explored the obstacles to successful integration and how these might be overcome. A qualitative approach and phenomenological design were employed to collect data via emailed open-ended questions and follow-up semi-structured in-depth interviews and the data was analysed through thematic analysis (TA). Thirty-five leaders working in elite sports participated. Findings revealed that while all participants ($n = 35$) endorsed the importance of MST in elite sports, 11% ($n = 4$) had incorporated it effectively into their environments. Unsuitable practitioners, a lack of leadership support, and insufficient time for successful application were highlighted as significant obstacles hindering successful integration. Recommendations to overcome these obstacles included the prioritisation of MST by leaders of elite sports environments, formulating bespoke MST strategies for their teams, clubs, or franchises, recruiting suitably qualified MST providers, and providing them with sufficient time and resources to effectively implement these strategies.

1. Introduction

Athletes need physical and mental skills to succeed at the highest levels of their sport, especially during pinnacle events (Cottrell, 2018). Sports teams, franchises and clubs have recognized this for an extended period. For example, numerous franchises that participate in the Super Rugby tournament have incorporated mental skills training (MST) since the inception of the competition in the 1990s. This also holds true for other sports such as major League Baseball (Nightengale, 2018).

Research on the mental side of performance in sport has also expanded as athletes and teams continuously seek a competitive advantage. Numerous studies have shown how training athletes from various sporting codes in mindfulness, cognitive and behavioral mental skills contributed towards improving their

overall performances (Brown & Fletcher, 2017, Bühlmayer et al., 2017, Gross et al., 2018, Gould & Maynard, 2009, Hardy et al., 2017, Harita et al., 2022, Hut et al., 2021, Noetel et al., 2019, Sparks & Ring, 2022, Vidic, 2021, Vidic & Cherup, 2022). Other studies have also found that athletes who engaged in MST participated in their sports for longer periods and at higher levels (Clowes & Knowles, 2013, Cottterill, 2011, Czech et al., 2004, Hayes, 2019, Hazell et al., 2014, Hogue, 2019, Mccann et al., 2001, McGowan et al., 2015). These athletes also tended to generally display more confidence, less pre-performance anxiety (Ong & Griva, 2017) and more emotional stability away from their sport (Hill et al. 2014, Ong & Griva, 2017, Patrick & Hrycaiko, 1998). Research has also revealed that most athletes are receptive to undergoing MST as part of their athletic development (Wrisberg et al., 2009). These apparent benefits along with the openness by athletes to engage in this form of training appear to

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highlight why it has seen a growing application in most sporting codes. However, some studies have also found that despite many coaches valuing MST, few of them made a deliberate attempt to develop these skills among their athletes (Creasy et al., 2009).

Zakrajsek et al. (2018) shed some light on why this might be the case by interviewing nine certified athletic trainers (ATs) from a National Collegiate Athletic Association Division 1 institution to investigate their perceptions and experiences of sport psychology services for student-athletes. Among their findings it was revealed that despite the participants being aware of these services in their environments, there still existed some confusion and uncertainty among them around what these services entailed and when, where how they could be accessed. To obtain clarity of the extent to which MST was being integrated among elite sports teams, clubs and franchises, it led the researchers to question whether mental skills were truly valued by their leaders and, to what extent they were being integrated into their overall performance strategies? Also, the researchers questioned what obstacles were potentially hindering such integration and how could they be overcome?

2. Methods

To answer the aforementioned questions, the study adopted a qualitative approach and phenomenological design. This was deemed the most suitable approach as the phenomenological design aims to explore the subjective experiences and views of a particular phenomenon from a group of people (Creswell, 2014). When considering the limited knowledge that could be identified pertaining to MST integration into elite sports environments, this approach was deemed applicable given that it was both explorative and descriptive in nature. Furthermore, phenomenological research provides a thorough understanding of participants' lived experiences which was also sought from the participants in this study (Creswell, 2014).

In the context of this study, a team, club, or franchise was deemed elite if it competed at the highest level of the sport. This included e.g., participating in top tier domestic competitions, transnational or international tournaments and events. It was also regarded as elite if its athletes and coaches participated on a full-time basis and were contracted and financially remunerated for their participation. Furthermore, an MST provider included both registered sports psychologists and mental skills coaches who were not necessarily registered and qualified psychologists. Therefore, all consultants who provided MST for elite sports teams, clubs, and franchises were viewed as MST providers for the purpose of this study. Finally, the following definition by Cumming (2018, para. 1) was adopted as the working definition of MST for its comprehensiveness and simplicity: "Also known as psychological skills training, MST involves the systematic development and application of mental techniques and skills to enhance mental qualities that promote performance and well-being".

2.1. Participants

The first author invited potential participants (n = 50) to participate. Inclusion criteria stipulated that participants needed to occupy a leadership position such as a head coach, assistant coach

or performance director at an elite team, club, or franchise in order to ensure that their responses were relevant to the research questions. It was also a requirement for these teams to have already engaged with MST in their environments as this was the focus of the study. They also needed to be able to converse in English, as this was the language used to gather the data.

Among the respondents who agreed to participate (n = 35), some were appointed as head or assistant coaches (n = 5) while others were performance directors (n = 30). They also identified as male (n = 32) and female (n = 3) with a mean age of 44 years. They represented different sporting codes, namely Major League Baseball, rugby union, rugby league, cricket, and field hockey. They averaged 8.3 years of leadership experience at elite teams, clubs, and franchises and represented various regions so as to obtain a broad perspective instead of solely focusing on a single sporting code within in one country. These included Australia & New Zealand (n = 13), Europe & the United Kingdom (n = 11), and North America (n = 11). No additional information about them could be included in an attempt to protect their confidentiality as most of them were well-known to the public.

The participants formed a non-random convenience sample given that they were selected by the first author to request their participation. Convenience sampling is frequently used in qualitative research as it allows participants to be included because they are the easiest for the researcher to access (White & McBurney, 2012). This was also the case in this project because, as an experienced mental skills coach, the first author had come to know the participants through his work with various elite sports teams, clubs, and franchises. He was therefore able to utilize his existing relational network to recruit them to participate in the study. As the focus of this study was on the state of integration of MST within elite sports teams, clubs, and franchises, they were specifically approached on the basis of being experienced coaches and performance directors operating in such environments. Although they were recruited through convenience sampling, effort was made to ensure that they represented as diverse a range of sporting codes and locations as possible, thereby ensuring that the data was collected from multiple and varied sources.

The data was originally collected by the first author for service delivery purposes between 2021 and 2022. Therefore, the participants were contacted again in 2023 to request their permission to utilize the data for research purposes as well. Ethical approval was sought and granted for this purpose from the University of Otago Ethics Committee (Reference number: D23/029).

2.2. Procedure

Once all the potential participants had been identified, they were approached via email by the first author to determine their willingness to participate in the study. Only those who voluntarily agreed to participate were then emailed the questions indicated in the following section and requested to complete it within ten days. This approach was selected to make it as convenient as possible for the participants to participate given that they all had very busy schedules. They were also asked whether they would agree to a personal follow-up interview about the topic.

After ten days, those among them who agreed to participate (n = 35) had emailed their responses to the first author. Follow-up

semi-structured in-depth interviews were also conducted with those who agreed to it (n = 5) by the first author. These interviews were conducted online and lasted an average of 30 minutes each.

2.3. Data collection

The following questions were posed to the participants:

1. Do you believe MST plays an important role in overall performance?
2. Does your team, club, or franchise currently incorporate MST in its overall performance strategy?
3. Does your team, club, or franchise implement MST on a weekly basis?
4. What are the major obstacles that have prevented MST from being integrated into your team, club, or franchise?
5. How do you believe obstacles towards MST integration in elite sports environments could be overcome?

Additional probing questions were added where indicated or in instances when participants did not spontaneously elaborate on their answers during interviews.

2.4. Data quality & integrity

Participants voluntarily partook in the study and signed an informed consent form on which confidentiality and anonymity were ensured. Given the fact that many of the participants were well-known to the public, special care was taken not to reveal their identities. Furthermore, the overall trustworthiness of the study was ensured by employing the strategies of credibility, dependability, conformability and transferability throughout the project as prescribed by Guba (1981) and synthesized by Krefling (1991) as well as following the guidelines proposed by Korstjens and Moser (2018).

2.5. Data analysis

Thematic analysis (TA) was used to analyze the data and the six steps proposed by Braun and Clarke (2006) served as the primary guide for this purpose. These steps were familiarization, generating initial codes, grouping codes according to similarity, reviewing of themes, defining and naming of themes and composing the final report.

Each interview was recorded and transcribed verbatim by the first author. Following this, the first author also anonymized and reviewed each of them to ensure grammatical accuracy. Both authors completed the first three steps proposed by Braun and Clarke (2006) individually while making use of an inductive, bottom-up approach to allow the codes to interpret the data as opposed to drawing on any existing theories. This was done to minimize potential bias or influence on each another's processes of analyzing the data during these initial steps. The authors then met to discuss their analyses and completed the remaining steps together which ultimately culminated in this publication.

Triangulation was achieved throughout this process through the frequent meetings between the authors to discuss the findings. This enabled a broader perspective to be created from which to interpret the data and allow their interpretations to be debated

before agreeing on the final themes & sub-themes reported in the following section (Korstjens & Moser, 2018).

3. Results

The first question posed to all participants was whether they regarded MST to be important for overall performance. All of them answered this as 'yes' (100%). The second question inquired whether their team, club, or franchise possessed a mental skills strategy at the time as part of their overall performance strategy. Four participants answered this questions as 'yes' (11%). The third question inquired whether MST took place on a weekly basis at their club, franchise or team. Five participants (15%) answered 'yes' to this question.

The fourth question asked the participants what they considered the major obstacles to be that prevented MST from being integrated into their environments. Their responses yielded the following themes and subthemes as depicted in Table 1:

Table 1: Obstacles hindering integration of mental skills training (MST).

Theme 1: Obstacles regarding MST service providers	
Sub-theme	Difficulty identifying appropriate MST providers
Sub-theme	Inadequate understanding of elite sport environments by some MST service providers
Theme 2: Obstacles regarding organizational cultures	
Sub-theme	Lack of organizational support from key stakeholders
Sub-theme	Siloed organizational approaches

In the interest of brevity, all quotations highlighting the themes and sub-themes could not be included in this article. Those included in italic below were selected on the basis of their similarity to other related comments. Reference to the number of respondents who made similar comments was however included. A comprehensive list of the data can be made available upon request.

The first theme revolved around challenges with MST providers. The first sub-theme referred to the challenge of identifying an appropriate individual to deliver such a service. Twenty-eight participants commented on this sub-theme, with one stating that "we have struggled to find someone [MST provider] who can connect with the group and deliver quality [MST] work." Another factor that frequently contributes to this sub-theme is the difficulty of measuring the actual impact of MST. Fourteen participants referred to this. One commented that "we have found it difficult at times to measure the impact of the mental skills work."

The next sub-theme pointed towards a lack of understanding of the particular environment by MST providers as perceived by key stakeholders. This also included a perceived lack of understanding of elite sport environments. Eighteen of the participants referred to this and one stated: "You [MST providers] have to be able to understand the pressures and demands [of elite sport] to be relevant to the players."

The next theme centered on challenges relating to the organization's existing culture. The first sub-theme highlighted the apparent lack of support from certain key stakeholders to include and promote MST. Sixteen participants commented on this sub-theme, one of whom highlighted the challenge of obtaining sufficient support for MST from their leaders: "The biggest challenge for us is getting the support of the GM [General Manager] and board [of Directors]. They seem to think that only weak players need help with the mind [MST] work." A related sub-theme highlighted by the participants was that MST is often implemented separately or in a siloed manner. For instance, one participant explained: "We haven't been able to integrate the [MST] work across our environment, we need to figure out how to do this [with other performance areas], or we won't get the buy-in we need."

The themes and sub-themes depicted in Table 2 emerged from participants' responses to the fifth question of how they believed obstacles towards MST integration in elite sports teams, clubs and franchises could be overcome:

Table 2: Recommendations of how obstacles hindering integration of mental skills training (MST) could be overcome.

Theme 1: Desirable attributes of service providers	
Sub-theme	Effective communication skills
Sub-theme	Understanding of elite sport
Theme 2: Enabling environmental factors	
Sub-theme	Support from leaders
Sub-theme	Prioritization and time allocation for mental skills training

The first theme referred to desirable skills and attributes of MST providers. The first sub-theme was that of effective communication skills to which two participants referred. One of them indicated: "We were fortunate enough to find someone [MST provider] who was able to hold the room and engage the players as well as connect with them in a one-on-one context." This also translated to how MST providers communicated their specific knowledge, which two participants referred to. One of them stated that "the best mental skills coaches [MST providers] I have worked with managed to create and communicate simple tools and practices that allowed theory to come alive."

The next sub-theme which emerged from the responses referred to the importance of MST providers requiring a thorough and clear understanding of elite sport. One participant explained: "Our [MST] provider identified early the mental demands of our game at this [elite] level and was able to tailor their program to meet those needs." Another participant stated that "there are some highly qualified people out there, but working in elite sport is very different from other jobs."

The next theme revolved around environmental factors that enabled effective integration of MST within elite sports environments. The first sub-theme highlighted here referred to the critical role of support for MST by leaders in these environments. Three participants referred to the importance of this, with one saying: "Once our leaders believed in the [MST] work, then everyone jumped on board." This is closely related to the next sub-theme of these teams, clubs and franchises prioritizing MST

by allocating sufficient time for it to be implemented effectively. Three participants mentioned the importance of this with one explaining how this was done effectively in their environment:

We [coaches and performance directors] would do a mental review and preview each week, just like the other aspects of the game. We use an expert [MST provider] to help us with this process and provide enough time for it to be important.

In summary, the results indicated that despite all the participants agreeing that MST is important for overall performance in elite sport, most of them indicated that it was not being effectively integrated into their environments. This appeared to indicate a contrast between the perceived and actual value of MST within their environments. Furthermore, many of them did not engage the services of a MST provider on a regular basis or had included MST in the overall performance strategies for their clubs, franchises, or teams. The main reasons the participants sighted for this were difficulties with finding suitable MST providers who possessed a satisfactory understanding of elite sport environments. Furthermore, organizational challenges such as a lack of support for MST by some leaders and applying it in a siloed approach were also noted. To overcome these barriers, participants suggested that MST providers need to develop effective communication skills and a sound understanding of what the needs are of athletes and coaches at the elite level of sport. Furthermore, certain factors surrounding MST needed to be developed including more support from leaders and allocation of sufficient time for it to be incorporated effectively within elite teams, clubs, or franchises.

4. Discussion

Results from the present study offered valuable insights into coaches and performance directors from elite sport teams, clubs, and franchises' perceptions of the integration of MST in their environments. Participants provided important insight into their perceived value of MST, the barriers hindering its optimal implementation and recommendations on how to overcome such barriers. These results are timely given the increasing interest around the globe in MST, sport psychology, mental performance, and mental health at the elite level of sport (Durand-Bush et al., 2022).

An interesting aspect that emerged from the findings of the present study was that the attributes of MST providers were highlighted in both the obstacles towards successful integration of MST as well as the recommendations of how it might be overcome. It also appeared that in instances where participants indicated successful integration had taken place, the MST providers had communicated and positioned themselves effectively within these environments. A poor understanding of the elite sport landscape by some MST providers along with a poor understanding of the unique demands that it places on athletes and coaches who operate at this level was further highlighted as a particular obstacle. Simultaneously, a clear understanding of this landscape combined with effective communication skills of MST providers were highlighted as ways to overcome this obstacle. This was closely related to the findings of a study conducted by Chandler et al. (2014) that had investigated the personal qualities of effective sport psychologists

from the perspectives of sports physicians who closely worked with them. It found the personal qualities of empathy and trustworthiness to be particularly important to being an effective sport psychologist. It also highlighted the importance of approachability, agreeability, and possessing the general ability to get along with people to build effective relationships with coaches and athletes alike. The study also found that effective sport psychologists could portray professionalism in practice by simultaneously portraying both humility and self-confidence. Furthermore, they possessed a clear understanding of their roles within the environment in which they operated and worked solely within the boundaries of what they were qualified for. Finally, the study highlighted the importance of the sport psychologist as a person requiring a strong drive towards empowering and genuinely caring for those they worked with in combination with an ability to communicate effectively (Chandler et al., 2014).

Apart from the individual attributes, skills or abilities of MST practitioners, the results further highlighted that the prevailing culture at elite sports clubs, franchises and teams played an important role in either hindering or enhancing the effective integration of MST. In this regard, leaders such as coaches and performance directors seemed to play a particularly important role. This is as leaders have been identified in the literature to set the tone in the creation and maintenance of prevailing organisational cultures (Shein & Schein, 2016). Zakrasjek et al. (2014) also found in their research that it was critical to obtain the 'buy in' from at least one leader for MST to be successfully integrated in an organisation. This appeared similar to the findings of this study as participants also remarked that in instances where leaders where they operated had 'bought in' to MST, it culminated in more support and time for it to be implemented and integrated into these environments. However, it was further reported by the participants that the opposite also held true where leaders had not 'bought in' to MST at their clubs, franchises, or teams.

Given the aforementioned, the results from this study pointed towards a situation where a combination of factors appeared to hinder or promote the effective integration of MST into elite sporting environments. In some cases, effective integration appears to be taking place where the organisational culture and its leaders are receptive to MST in combination with a suitably qualified MST practitioner who possesses a clear understanding of the environment and optimal communication skills. In instances where this is not the case, there appears to be a lack of integration of MST. To promote effective integration of MST at elite sports teams, organisations and franchises, the authors proposed the following recommendations based on the responses from the participants.

5. Recommendations

The results of this study provided valuable insights from the perspectives of coaches and performance directors with extensive experience at the elite level of sport. These insights translated into the following practical recommendations for leaders of elite sports teams, clubs, and franchises as well as MST providers who aim to work in these environments. The following recommendations are for leaders:

5.1. Incorporate MST providers into management teams

A team can have an MST provider appointed on its payroll who is tasked with facilitating the MST, but that is very different from having this individual truly integrated into the environment as one participant explained:

I wonder if we set up the Psych's [or MST providers] for failure by not having a system in place to help them integrate. We look to the [MST] provider if things go wrong, but I wonder if we need to look at ourselves first.

It is therefore recommended that MST providers be fully incorporated such as by including them in important team management meetings as early as possible following their appointment and allowing them to provide input on decisions. As experts in mental skills, they are often in a unique position to provide valuable insights that might otherwise be overlooked.

5.2. Include an MST strategy in the overall performance strategy

If a team, club or franchise already had an MST strategy in place, it would most likely provide a clear picture of what is required from MST in that context. Leaders can then focus on recruiting a provider who is best suited to implement it. As such, it is recommended that finding an appropriate a provider take place after a clear MST strategy was first established and included in the overall performance strategy.

5.3. Ensure the MST provider possesses an understanding of elite sport

The preferred MST provider should ideally be able to provide a clear track record to illustrate their understanding of the unique contextual demands of elite sport in addition to their qualifications. Possessing certain qualifications such academic qualifications does not necessarily automatically equate to a sufficient understanding and knowledge of this environment and the pressures it places on coaches and athletes who operate within it.

5.5. Allocate sufficient time for MST

Another recommendation is to allocate sufficient time in training programs for the implementation of MST. If the work is truly regarded as valuable and relevant by key stakeholders to overall performance, there needs to be sufficient time allocated for its optimal implementation to occur. How much time is, however, difficult to determine given that each elite team, club, or franchise is unique. Time is generally also a very precious commodity in these environments. As such, to determine how much time would be sufficient will depend on the unique needs of the coaches and athletes. If they feel they are obtaining sufficient benefit from the amount of time allocated to MST, it most likely is sufficient and no changes would be required. However, one of the participants made the following statement regarding insufficient time allocated to MST: "Our [elite sports] environments are quite time poor, so the mind work [referring to MST] tends to happen behind the scenes and, to be honest, is a bit of an afterthought."

If the views among players and coaches are like the view expressed by this participant, it might warrant more time to be allocated towards MST. A brief survey among players and

coaches might give an answer to this. The participants expressed that keeping MST behind the scenes and having someone available for it rather than intentionally integrating time for MST in their training programs could silo MST and hinder its integration. The challenge would be to carve out time to invest in this work in already busy schedules. Effective integration will, however, only occur if MST is truly regarded as a key component of overall performance and time then dedicated for players and coaches alike to grow collectively from accessing it. The next recommendations are for MST providers.

5.5. Ensure support from key stakeholders before accepting a new role

Optimal integration of MST within an elite sports team, club, or franchise depends on support from all the critical stakeholders, including athletes, coaches, support staff and performance directors to drive the work throughout their environment. The findings revealed that the work would not flourish if it was conducted in a siloed manner. Historically, MST has often been viewed as a luxury, additional service, or something athletes would engage in when recovering from injury or when noticing a dip in performance (Zakrajsek et al., 2018). In recent times, there however appears to have been a gradual move away from this perception, for instance with increasing numbers of elite athletes speaking more openly about their mental health. Despite this, a stigma associated with working with the minds of athletes still persists in some sectors (Moreland et al., 2018). For this to be overcome and optimal integration of MST to occur, it is recommended that evidence for the contribution towards overall performance of MST be presented by MST providers to all stakeholders in elite sports environments to inform them of its importance and value. An opportunity to do so should ideally be discussed and confirmed with leaders in these environments prior to accepting a role of MST provider while discussions around mutual expectations and contracting are still in progress.

5.6. Measure and communicate the impact of MST

When referring to the measurement and impact of MST, one participant stated:

In other areas of performance we give a clear mandate of what we want to happen in the program, there are regular checkpoints to ensure we are on track, and we review the work after the season, with the mental stuff [MST] we tend to find a person and just let them loose, we don't follow best practice.

Another participant echoed this statement in saying that “we have found it difficult at times to measure the impact of the mental skills work [MST].” These comments highlighted the importance of measuring and providing feedback by MST providers to all key stakeholders on the impact of MST. When however considering the nature of MST, this can be challenging. For instance, concrete datasets such as those produced from GPS trackers used in other performance areas cannot be produced in the same way for MST. As such, other performance areas that produce such tangible outcome datasets may be viewed by some stakeholders as more credible. This is logical given that it could be easier to determine if a training program was producing the desired outcomes if its

progress was measured against such concrete data. This could also lead to situations whereby coaches and athletes may dedicate more time, resources and energy towards these performance areas given that their outcomes appear more tangible. This in turn might contribute to slower or ineffective integration of MST in elite teams, clubs, and franchises.

The more subjective nature of MST requires a different approach to measure its impact, and research is continuously providing more and improved options to do so. For instance, numerous evidence-based psychometric instruments are already available to MST providers, like the Athletics Coping Skills Inventory 28 (Smith et al., 1995), Psychological State Test for Athletes (Díaz-Tendero et al., 2020), Sports Personality Questionnaire (Raharjo, 2018), Psychological Skill Inventory (Milavic et al., 2019) and Ottawa Mental Skills Assessment Tool-3 (Durand-Bush et al., 2001), to name but a few. The selection of which of these instruments to use should ideally flow from a thorough analysis by MST providers of the unique needs of the elite teams, clubs, or franchises in which they operate. More recently, Durand-Bush et al. (2022) developed a comprehensive, evidence-informed framework that might also better assist MST providers as part of this process, namely the Gold Medal Profile for Sport Psychology (GMP-SP). This framework was established to guide MST providers and sports organisations with their design, delivery, tracking, and evaluation of MST. Regardless of which tools or approaches MST providers opt to use, it is recommended that they measure and provide feedback on the impact of the MST they provide to all key stakeholders at various intervals throughout their involvement to promote more effective integration of MST at elite clubs, teams, and franchises.

6. Limitations

Thirty-five participants took part in this study which represented a relatively small sample size. Due to this they could not represent all sporting codes (e.g., football, basketball, golf, and motor sports were not represented). They also held existing relationships with the first author which might have influenced their responses and only three of them identified as female. Therefore, care should be taken not to generalise the findings of the present study to all elite sports environments. In hindsight, the authors also felt there was latitude to have potentially included additional questions that might have provided more additional valuable data. Despite this, the study managed to achieve its aim of providing valuable insight on the current status of MST integration into elite sports environments from a variety of leaders with extensive experience in these contexts. For future studies it would be beneficial to expand on these findings by potentially conducting quantitative or mixed methods studies with larger sample sizes, including more female participants and more sporting codes. As athletes were not included among the respondents in this study, future studies could also include them to obtain their perspectives on the topic. Furthermore, all the participants from this study operated in countries and organisations that predominantly represented what could be described as Western cultures. It would, therefore, be beneficial for future studies to also include participants from other cultures. This would hopefully also highlight their unique perspectives and needs when it comes to MST in their environments.

7. Conclusion

Studies on the benefits of MST in sport were identified from the literature, however, few could be identified that had examined its state of integration within elite sports teams, clubs, and franchises. This study aimed to take a step towards filling this gap by obtaining an indication on the current status of MST integration within these environments. Thirty-five participants took part in the study and provided their valuable insights as experienced leaders who understood both the context and demands of elite sports environments. Despite being from different regions and involved in different sporting codes, similar ideas and challenges frequently appeared to emerge from their responses. These revealed that despite being valued, several obstacles still persisted in their environments that inhibited MST from being optimally integrated. Some recommendations were included based on these findings to potentially overcome these obstacles. Additional research is required with larger samples and different respondents on how best to overcome these obstacles and integrate MST more effectively into these environments in the future.

Conflict of Interest

The authors declare no conflict of interests.

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References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brown, D. J., & Fletcher, D. (2017). Effects of psychological and psychosocial interventions on sport performance: A meta-analysis. *Sports Medicine, 47*, 77–99. <https://doi.org/10.1007/s40279-016-0552-7>
- Bühlmayer, L., Birrer, D., Röthlin, P., Faude, O., & Donath, L. (2017). Effects of mindfulness practice on performance-relevant parameters and performance outcomes in sports: A meta-analytical review. *Sports Medicine, 47*, 2309–2321. <https://doi.org/10.1007/s40279-017-0752-9>
- Chandler, C., Eubank, M., Nesti, M., & Cable, T. (2014). Personal qualities of effective sport psychologists: A sports physician perspective. *Physical Culture and Sport. Studies and Research, 61*(1), 28–38. <https://doi.org/10.2478/pcssr-2014-0003>
- Clowes, H., & Knowles, Z. (2013). Exploring the effectiveness of pre-performance routines in elite artistic gymnasts: A mixed method investigation. *Science of Gymnastics Journal, 5*(2), 27–40.
- Cottrell, S. (2018). *Elite athletes' rights and welfare*. Sport New Zealand. <https://sportnz.org.nz/media/3193/elite-athlete-right-and-welfare.pdf>
- Cotterill, S. T. (2011). Experiences of developing pre-performance routines with elite cricket players. *Journal of Sport Psychology, 43*(2), 81–91. <https://doi.org/10.1080/21520704.2011.584245>
- Creasy, J. W., Rearick, M., Buriak, J., & Wright, L. (2009). Are you coaching mental skills? Why not? *VAHPERD Journal, 30*(2), 13–15.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). SAGE publications.
- Cumming, J. (2018, July 18). *What is mental skills training?* <https://jennifercumming.com/2018/07/20/what-is-mental-skills-training/>
- Czech, D. R., Ploszay, A. J., & Burke, K. L. (2004). An examination of the maintenance of preshot routines in basketball free throw shooting. *Journal of Sport Behavior, 27*(4), 323–329.
- Díaz-Tendero, P., Pérez-Llantada, M. C., & López de la Llave, A. (2020). Psychometric properties of the Psychological State Test for athletes (TEP). *Frontiers in Psychology, 11*, 1–13. <https://doi.org/10.3389/fpsyg.2020.566828>
- Durand-Bush, N., Salmela, J.H. & Green-Demers, I. (2001). The Ottawa Mental Skills Assessment Tool (OMSAT-3). *The Sport Psychologist, 15*, 1–19. <https://doi.org/10.1123/tsp.15.1.1>
- Durand-Bush, N., Baker, J., van den Berg, F., Richard, V., & Bloom, G. A. (2022). The Gold Medal Profile for Sport Psychology (GMP-SP). *Journal of Applied Sport Psychology, 1–24*. <https://doi.org/10.1080/10413200.2022.2055224>
- Gould, D., & Maynard, I. (2009). Psychological preparation for the Olympic Games. *Journal of Sport Sciences, 27*(13), 1393–1408. <https://doi.org/10.1080/02640410903081845>
- Gross, M., Moore, Z. E., Gardner, F. L., Wolanin, A. T., Pess, R., & Marks, D. R. (2018). An empirical examination comparing the mindfulness-acceptance-commitment approach and psychological skills training for the mental health and sport performance of female student athletes. *International Journal of Sport and Exercise Psychology, 16*(4), 431–451. <https://doi.org/10.1080/1612197X.2016.1250802>
- Guba, E. G. (1981). ERIC/ECTJ Annual Review Paper: Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology, 29*(2), 75–91. <https://www.jstor.org/stable/30219811>
- Harita, A. N. W., Suryanto, S., & Ardi, R. (2022). Effect of Mindfulness Sport Performance Enhancement (MSPE) to reduce competitive state anxiety on karate athletes. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran, 8*(2), 169–188. https://doi.org/10.29407/js_unpgr.v8i2.17807
- Hazell, J., Cotterill, S. T., & Hill, D. M. (2014). An exploration of pre-performance routines, self-efficacy, anxiety and performance in semi-professional soccer. *European Journal of Sport Science, 14*(6), 603–610. <https://doi.org/10.1080/17461391.2014.888484>
- Hardy, L., Barlow, M., Evans, L., Rees, T., Woodman, T., & Warr, C. (2017). Great British medalists: Psychosocial biographies of super-elite and elite athletes from Olympic sports. *Progress in Brain Research, 232*, 1–119. <https://doi.org/10.1016/bs.pbr.2017.03.004>
- Hayes, C. (2019). *Mind Games: Does Using a Mental Skills Coach Improve the Performance of Professional Baseball Players?* [Doctoral thesis, Harvard University].
- Hogue, C. M. (2019). The protective impact of a mental skills training session and motivational priming on participants' psychophysiological responses to performance stress.

- Psychology of Sport and Exercise*, 45, 1–10. <https://doi.org/10.1016/j.psychsport.2019.101574>
- Hut, M., Minkler, T. O., Glass, C. R., Weppner, C. H., Thomas, H. M., & Flannery, C. B. (2021). A randomized controlled study of mindful sport performance enhancement and psychological skills training with collegiate track and field athletes. *Journal of Applied Sport Psychology*, 35(2), 1–23. <https://doi.org/10.1080/10413200.2021.1989521>
- Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy*, 45(3), 1–19. <https://doi.org/10.5014/ajot.45.3.214>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>
- Mccann, P., Lavalley, D., & Lavalley, R. (2001). The effect of pre-shot routines on golf wedge shot performance. *European Journal of Sport Science*, 1(5), 1–10. <https://doi.org/10.1080/17461390100071503>
- McGowan, C. J., Pyne, D. B., Thompson, K. G., & Rattray, B. (2015). Warm-up strategies for sport and exercise: mechanisms and applications. *Sports medicine*, 45(11), 1523–1546. <https://doi.org/10.1007/s40279-015-0376-x>
- Milavic, B., Padulo, J., Grgantov, Z., Milić, M., Mannarini, S., Manzoni, G. M., Ardigo, L. P., & Rossi, A. (2019). Development and factorial validity of the Psychological Skills Inventory for Sports, Youth Version–Short Form: Assessment of the psychometric properties. *PLoS ONE*, 14(8), 1–17. <https://doi.org/10.1371/journal.pone.0220930>
- Moreland, J. J., Coxe, K. A., & Yang, J. (2018). Collegiate athletes' mental health services utilization: A systematic review of conceptualizations, operationalizations, facilitators, and barriers. *Journal of Sport and Health Science*, 7(1), 58–69. <https://doi.org/10.1016/j.jshs.2017.04.009>
- Nightengale, B. (2018, April 3). *Why Major League Baseball is "90% mental" now more than ever*. USA Today Sports. <https://www.usatoday.com/story/sports/mlb/columnist/bob-nightengale/2018/04/03/mlb-mental-health-coaches/482122002/>
- Noetel, M., Ciarrochi, J., Van Zanden, B., & Lonsdale, C. (2019). Mindfulness and acceptance approaches to sporting performance enhancement: A systematic review. *International Review of Sport and Exercise Psychology*, 12(1), 139–175. <https://doi.org/10.1080/1750984X.2017.1387803>
- Ong, N. C., & Griva, K. (2017). The effect of mental skills training on competitive anxiety in schoolboy rugby players. *International Journal of Sport and Exercise Psychology*, 15(5), 475–487. <https://doi.org/10.1080/1612197X.2016.1153129>
- Patrick, T. D., & Hrycaiko, D. W. (1998). Effects of a mental training package on an endurance performance. *The Sport Psychologist*, 12(3), 283–299.
- Raharjo, H. P., Kusuma, D. W. Y., & Mugiyo, H. (2018). Personality characteristics in individual and team sports. Proceedings of the International Seminar on Public Health and Education 2018 (ISPHE), Atlantis Press, 92–95. <https://doi.org/10.2991/isphe-18.2018.20>
- Schein, P. A., & Schein, E. H. (2016). *Organizational culture and leadership*. John Wiley & Sons.
- Smith, R. E., Schutz, R. W., Smoll, F. L., & Ptacek, J. T. (1995). Development and validation of a multidimensional measure of sport-specific psychological skills: The Athletic Coping Skills Inventory-28. *Journal of Sport and Exercise Psychology*, 17(4), 379–398. <https://doi.org/10.1123/jsep.17.4.379>
- Sparks, K. V., & Ring, C. (2022). A rowing-specific mindfulness intervention: Effects on mindfulness, flow, reinvestment, and performance. *Frontiers in Psychology*, 13, 871804–871804. <https://doi.org/10.3389/fpsyg.2022.871804>
- Vidic, Z. (2021). Sharpening the mental edge in ice-hockey: impact of a season-long psychological skills training and mindfulness intervention on athletic coping skills, resilience, stress and mindfulness. *Journal of Sport Behavior*, 44(4), 468–486.
- Vidic, Z., & Cherup, N. P. (2022). Take me into the ball game: An examination of a brief psychological skills training and mindfulness-based intervention with baseball players. *International Journal of Sport and Exercise Psychology*, 20(2), 612–629.
- White, T. L., & McBurney, D. H. (2012). *Research methods*. Cengage Learning.
- Wrisberg, C. A., Simpson, D., Loberg, L. A., Withycombe, J. L., & Reed, A. (2009). NCAA Division-I student-athletes' receptivity to mental skills training by sport psychology consultants. *The Sport Psychologist*, 23(4), 470–486. <https://doi.org/10.1123/tsp.23.4.470>
- Zakrajsek, R. A., Fisher, L. A., & Martin, S. B. (2018). Certified athletic trainers' experiences with and perceptions of sport psychology services for student-athletes. *The Sport Psychologist*, 32(4), 300–310. <https://doi.org/10.1123/tsp.2017-0119>