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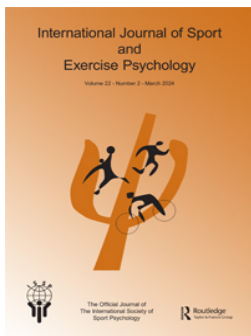
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Good practice in sport science and medicine: perceptions of leaders on support and management of practitioners and teams

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ABSTRACT

The evaluation and delivery of good practice in the provision of Sport Science and Medicine (SSM) is clearly of interest and importance – with applied research, both anecdotal and empirical, that is burgeoning. However, no literature to date explores the role of the organisation and leader in supporting those striving to deliver good practice. The primary aim of this investigation is to explore the perceptions of experienced high-level leaders in the leadership, direction and operation of SSM practitioners and teams. A mixed methods modified Delphi technique, with three stages of investigation – a quantitative survey, individual interviews, and focus group discussions, was undertaken with 13 leaders of high-performance sport organisations in Europe and Australasia. This approach allowed expert consensus to be arrived at on a set of theoretically underpinned principles applicable to the pan regional support of good practice. A plethora of principles are offered relating to three core areas of support: organisational requirements; leadership; and practitioners' skills and development. Importantly, a number of operational considerations for application are captured, including the impact of situational context in determining the focus and core elements of support required. Findings are particularly relevant for those leading SSM delivery – with a well led, organised and supported approach seemingly enabling good practice. In addition, results offer further empirical support to the importance of interdisciplinary teamwork, non-technical skill sets and relevant development opportunities for the practitioner. Overall, we hope the principles derived offer a practical starting point for those engaged in SSM provision.

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Good practice in sport science and medicine: perceptions of leaders on support and management of practitioners and teams

The number and variety of Sport Science and Medicine (SSM) roles (e.g., medic, psychologist, physiologist, strength and conditioning coach) on offer is increasing, and those

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employed in roles have the challenge of demonstrating impact in complex and dynamic performance settings. Impact may be defined in a number of ways and many facets of delivery maybe outside of a SSM practitioners' control (for example, the ultimate performance of the athlete/sport) therefore there is a suggestion that delivering with good practice (GP hereafter) should be the focus (Alfano & Collins, 2023). This assumes GP enhances the quality of service delivery – inherently linked to optimising impact and hopefully success in a role. Authors have a background in SSM high performance delivery settings and importantly in management roles, and our experience suggests the challenge of determining how to support teams and individuals to optimise their delivery is also increasingly apparent. Therefore, a greater understanding of GP is important for those striving to deliver SSM but also crucially for those employing, directing and leading the provision.

Elements of and recommendations for GP have been explored in other service delivery domains. The General Medical Council, for example, capture good medical practice under the following areas: knowledge, skills and performance, safety and quality, communication partnership and teamwork, and maintaining trust. Effective interdisciplinary working, role understanding, managing decisions and maintaining relationships feature as key elements within these areas supported in wider medical literature (e.g., Garmel, 2004; Peabody, 2015). Some of these ideas are echoed within the sport management literature both anecdotal and research based, albeit that the majority of research to date emanates from the discipline of sport psychology (e.g., Anderson et al., 2002; Ballie et al., 2015). Whilst lessons may be learned and (perhaps) extended from this field, only a limited amount of empirical research is currently available.

In one of the few empirical investigations to date, Alfano and Collins (2021) explored cross discipline perceptions of GP from the perspective of those involved in support; namely, the sport science and medicine practitioner (SSMP hereafter) and the employers – the Performance Directors. The researchers' suggested GP was defined by the ability to *apply* technical expertise and deliver relevant provision/support within the context (circumstances which form the setting), the environment (the specific surroundings in which the SSMP operate in), the role, the people and the team. Sources of knowledge from sport, organisational management and other performance domains (including business and military; Biron et al., 2011; Fiore et al., 2012) supported the findings, offering relevant theoretically grounded constructs such as role clarity, professional judgement and decision making (PJDM), leadership styles and shared mental models. These constructs are not new but have, as yet received slight consideration in the SSM literature. Alfano and Collins (2023) extended the research into SSM GP further, conducting a longitudinal investigation into SSMP's experiences of practice delivery. Researchers suggested that SSMPs experienced numerous challenges in their delivery, most often these were organisational (e.g., the client setting unrealistic expectations of the hours they expected to be spent with the sport) and/or interpersonal (e.g., a colleague misunderstanding, and misinterpreting an SSMPs' perspective) in nature. Importantly, critical sources of support in navigating barriers to delivering GP were identified, and clear roles for the organisations and those in SSM leadership roles were highlighted.

The role of organisations and leadership in employee performance is not a new idea. The impact of the organisation on challenges experienced and the workforces' ability to deliver aligns to previous literature (e.g., Biron et al., 2011; Jones et al., 2009; Wagstaff

et al., 2012; Wylleman, 2019) – including some which has specifically explored the impact of organisational change on the SSMP (Wagstaff et al., 2015). In wider business literature, the role of the direct leader has been shown to impact performance of the workforce, for example explaining productivity and variations in performance of workers in car manufacturing (Giardili et al., 2023). In sport specific literature, positive leadership models have been linked to successful performance (Gilmore & Gilson, 2007; Potrac & Jones, 2009), and optimal styles to support team delivery have also been investigated (e.g., Callow et al., 2009; Cruickshank & Collins, 2015; Fletcher & Arnold, 2011). However, no papers to-date have explicitly investigated the support that an organisation or leader may offer to enable and encourage GP in SSM delivery, nor have they extended insight from a wider base of literature into this domain. It is important to note that previous investigations into GP are often based in one geographical location (Europe) and it is important to start to explore any potential variations across locations.

With the gaps in empirical literature highlighted challenges exist for the organisation, and SSM leaders, in determining the support offered in order to optimise the investment in SSM. Equally, the SSMP has the challenge of determining their delivery model and support requirements in order to optimise their impact. Therefore, in order to support those in delivery and leadership roles, further investigation is required to determine how GP is understood, supported and relates to the wider SSM disciplines. With support seemingly critical to GP, deepening our understanding, across geographical locations, on elements of the leadership, direction and management of GP and potential sources of support (i.e., theoretically grounded constructs) is crucial with key implications for the training, preparation, and ongoing support of the SSMP at stake.

Therefore, to gain further insight into the effective propagation of GP delivery, the primary aim of the present investigation is to explore the perceptions of high-level leaders regarding the leadership, direction and operation of SSMPs and SSM teams (SSMTs hereafter). Derived from expert consensus, we sought to arrive at a set of principles designed to support and enhance the delivery of GP, collated from the body of existing empirical and anecdotal literature, and augmented from a variety of specialist occupational domains. As a secondary aim we explore how principles of support may be operationalised and applied in daily situations. We hope the insight gained offers a first empirical look at the provision required to support GP delivery – addressing gaps in the current understanding, extending insights from the SSM and other domains, and offering support to delivering SSMPs and those employing and leading SSM provision. Additionally, given that sport is a global industry we also aimed to explore the impact of any psycho-social variations in perceptions by assaying and comparing opinion, and consensus, from two geographical locations.

Methodology

Research philosophy and design

In order to gain both consensus on a set of evidence-based principles for support *and* insight to participants' thoughts pertaining to the operationalisation and support of GP, we used a pragmatic research philosophy. Pragmatism, a useful and common approach in applied sport psychology research (Giacobbi et al., 2005), offers an inquiry

focused on understanding problems and identifying practical solutions. Pragmatists believe reality is constantly renegotiated and interpreted, that knowledge results from experience and that the best methods are those that solve problems (Creswell, 2019). Therefore, this approach aligned appropriately with the investigation aims to not only understand perspectives, but to capture the consequences of perceptions and ultimately develop guidance for change; in short, an intention to influence real world practice. This approach also allowed for the exploration and testing of knowledge (evidence-based principles) against experience and learning through the reflections of each participant's experiences (Creswell, 2019). Of course, an implicit assumption was that participants' knowledge will be socially constructed – their ways of working based on their interactions and experiences (see Schreiber & Valle, 2013, for an overview of social constructivism). Hence, the focus on exploring both knowledge and contrast across participants, and geographical locations.

Importantly, these ideas and our aims led to our methodological choices. A mixed methods modified Delphi method was selected – a novel approach enabling the deep exploration of consensus and divergent views of experts, against existing knowledge and across multiple stages of investigation (see Brady, 2015; Iqbal & Pison-Young, 2009; Jorm, 2015). A combination of qualitative and quantitative procedures were selected, with results accrued from each round collated, analysed, and returned to participants for review. This enhanced the validity/trustworthiness of the data and offered participants the opportunity to reassess, elaborate upon and potentially refine their judgements. Consequently, the likelihood of finding relevant and rich results based on experience was increased (see Brady, 2015; Iqbal & Pison-Young, 2009; Jorm, 2015). Importantly, several rounds of mixed methods investigation allowed for triangulation (verification of the data from two or more sources) of the data to occur and best practice recommendations available at the time in each area of data capture, analysis and interpretation were utilised in order to pursue rigour and trustworthiness.

Participants

Thirteen experienced high-level leaders of high-performance sport organisations (e.g., Director of Performance Support, Head of Performance) were purposefully recruited to form the panel of experts. Eight participants were working in Olympic/Paralympic settings and five in Professional sports organisations – two had extensive experience of both. At the time of interview, all currently held or had recently held a related role for at least three years and possessed a high level of knowledge and experience in the leadership of SSM services. Co-authors were utilised as an “expert panel” and point of triangulation in support of participant's job roles and domain status when determining the inclusion criteria (cf. Nash et al., 2012). Participants were grouped based on their geographical location, these included: Europe (N = seven) and Australasia (N = six). Participants consisted of 13 males – we did try to secure female participants with an appropriate level of experience and achievement. Unfortunately, they proved difficult to locate and/or engage. See supplementary material for detailed participant information.

Instrumentation

Against our aim to test knowledge against experience a survey approach was chosen as the initial round of investigation – to solicit views and ascertain consensus and differences in opinion. Specifically, a number of evidence-based principles relating to the leadership and direction of SSMPs & SSMTs were surveyed. The principles included were based on insight, existing constructs (e.g., role clarity, PJDM, shared mental models and psychological safety) and empirical literature from other performance domains (e.g., medicine, military, business) identified as relevant by previous investigations undertaken into GP in SSM (Alfano & Collins, 2021, 2023) (data sources can be made available on request).

To increase the validity, several steps were taken in the development of the survey (see Nemoto & Beglar, 2014). Each principle offered was designed to be readily comprehensible and to measure a specific aspect relating to the aims of the investigation, with similar themes also selectively employed to assess participants' consistency. It was anticipated that respondents would use the full range of values on the Likert scale. Importantly, the survey, and subsequent individual interviews (Round Two), were piloted with two representative participants to gather feedback and enable modification to the principles included. The main adjustments made were to the wording and sequencing of the questions to ensure there was a coherent flow throughout – no principles were excluded at this point.

Procedures

Ethical approval was obtained from the authors' institutional ethics committee and informed consent was completed prior to data collection. Importantly, this included the consent of each participant to be named in any outputs to demonstrate the level of expert engaged and give weighting to the findings (gained from 12 of the 13 participants – see supplementary material). The mixed methods approach, undertaken with each participant, consisted of the following stages:

- (1) Round One quantitative survey: The set of evidenced based principles, were shared with participants who were asked to rate the importance of each on a Likert scale (0 – *Not important at all* to 10 – *Absolutely critical*). See Table 1 for principles.
- (2) Round Two feedback and interviews: Survey results were collated within each geographical group and returned to the participants individually for review. This included their own opinions plus areas of consensus and disagreement across the group. Semi-structured interviews then took place with each participant to explore their own responses, provide context and situate a point of reference in the performance environment. The focus was to discuss areas of disagreement and gain further insight into each participant's general thoughts, rationale for their survey responses, and glean examples of optimal operationalisation. Participants were also asked about any principles they would add – importantly all agreed it was comprehensive with no further principles to augment.
- (3) Round Three focus groups discussions: A small focus group discussion took place with each geographical group in order to further explore the set of principles, look to gain consensus where ratings differed (i.e., where less than 70% agreement or high

standard deviation existed within the group) and allow the experts the opportunity to reflect, expound views and learn from each other. The European group consisted of five participants and the Australasian four, participants unable to attend were contacted afterwards with key discussion points to allow for further feedback and input.

All interviews and focus groups were conducted online by the first author. Interviews lasted between 40 and 80 min ($M = 58$) and the focus group mean duration was 82 min. Both modes of data collection were audio recorded for later transcription and analysis.

Analysis

To address the aims of the study and to enable specific idea generation and comparison, data were first analysed within geographical groups. Subsequently, data was contrasted and considered collectively for the development of a set of principles and operational considerations applicable to pan-regional sports management support of SSM delivery.

Quantitative

For provision of feedback initial questionnaire data were analysed to generate the mean, percentage and standard deviations across the group. Then in relation to the aims of this round, and based on previous Delphi investigations (e.g., Jorm, 2015), definitions regarding sufficient consensus between participants were defined prior to data collection. This allowed principles with no consensus or importance to be removed, and the remaining ones to be grouped according to consensus reached, and any areas of contention identified – these were then explored in further rounds of the investigation. It was determined that statements with 70% agreement of an importance level of *Very important* to *Absolutely critical* (8-10 rating) and with at least 55% of participant responses within the extreme of the scale (rating 10 – *Absolutely critical*) were considered to have ‘critical’ consensus as an important principle for consideration. Statements with over 60% agreement of an importance level of *Very important* to *Absolutely critical* (8-10 rating) were considered as ‘clear’ consensus, less than or equal to 50% was considered ‘marginal’ consensus and anything less than 45% ‘not applicable’.

Qualitative

Both the interviews and focus groups recordings were transcribed verbatim before a thematic content analysis was conducted. This enabled deep insight and categorisation of the data to be enacted and core areas for consideration captured. In alignment with the pragmatic approach there was a requirement to observe and interpret data from the participants’ point of view, here the authors’ experience and background supported our ability to make contextual interpretations of the data (McGannon et al., 2021). Data analysed consisted of quotes that related to the set of principles posed in Round One. Data not related to these principles, or the aims of the paper, were not included in the analysis. Following procedures originally suggested by Côté et al. (1993) and subsequently supported and refined upon by others (e.g., Braun & Clarke, 2006), data were read and re-read several times for familiarisation, raw data units were transformed by the lead author into codes, then thematic hierarchies (e.g., “Leadership”; “Support structures”) grouping similar codes into subthemes, before reviewing, defining, naming, and

finally organising these sub-themes into a distinct framework of higher order themes. Responses were also coded for commonality and consensus. Analysis of focus group data also sought to identify the extent of agreement or disagreement and any shifts in opinion. Once higher order themes were established, shared and discussed with the other members of the research team, the first author wrote an interpretation of the data, using quotations to support their perceptions.

Trustworthiness. Addressing trustworthiness, in order to increase the rigour of the lead authors interpretations co-authors reviewed a random 20% of scripts against the themes identified. They also acted as critical friends throughout the process, which included reviewing, challenging, and suggesting refinements to the tags and themes developed by the lead author (cf. Faulkner & Sparkes, 1999). Following completion of the data analysis, and reflecting best practice recommendations (Smith & McGannon, 2018), each participant was contacted to garner their reflections on the results of data collection, giving additional insight and ensuring robust understanding. All 13 participants responded and collectively perceived the results to be highly representative of their input. Importantly, none expressed any disagreement with the content or nature of the themes, nor did they report any additional perceptions beyond the themes and principles captured. Some did take the opportunity to reiterate specific principles they deemed critical, for example role clarity and effective communication. These additional data were then incorporated into the total set, offering the most comprehensive picture possible.

Results

A rich and in-depth data set emerged from the rounds of investigation. Against our aims first we explore the set of principles derived from the Round One survey data, before considering the additional insights and operational considerations gained from the qualitative rounds of the investigation.

Round One

Table 1 presents the Round One survey data offering a comprehensive list of principles that gained either critical or clear consensus (as defined in the Methods) in each group – with key differences highlighted. Where the criteria for consensus are not met in either group a statement from the original set of principles is not included. Importantly, clear consensus is seen where principles are repeated to assess respondents' consistency – all statements are included in Table 1.

Round One results suggest a high level of pan-regional expert consensus on a large number of considerations for those leading and directing GP for SSMPs and SSMTs. The levels of consensus gained was high both within (of the 101 principles offered, the European group gained consensus, either critical or clear, on 75 in total and the Australasian group on 83 in total) and between the regional groups investigated (only 15 principles demonstrated between-group differences). Despite many principles being identified as important, there were standout areas, with high levels of consensus and importance, which consequently we deemed as essential for consideration – giving some sense of priority to the principles captured. The formulation and dissemination of vision and strategy are clearly critical, with dissemination one of only two items to gain critical consensus of

Table 1. Round One survey data.

STATEMENTS	EUROPE	AUSTRIALASIA
1. Leadership & Direction: Strategy & Role	Consensus Importance	Consensus Importance
a) Disseminate an organisational vision for performance	Critical	Critical
b) Formulate an organisational vision for performance	Critical	Clear
c) Facilitate effective IDT working	Critical	Clear
d) Formulate a clear strategy	Clear	Clear
e) Disseminate a clear strategy	Clear	Clear
f) Offer clarity to SSMT on their roles	Clear	Clear
g) Offer clarity on how success will be measured for the SSMT	Clear	Clear
h) Ensure there are clear objectives for each SSMP role	Clear	Clear
i) Have processes in place to support SSMP & SSMT working	Clear	Clear
j) Ensure there are clear objectives for the SSMT	Clear	Clear
k) Offer clarity as to how success will be measured for each SSMP	Marginal	Clear
2. Leadership & Direction: Environment		
a) Allow individuals to feel accepted and respected	Critical	Clear
b) Allow individuals to feel safe to learn	Critical	Clear
c) Allow individuals to feel safe to contribute	Critical	Clear
d) Allow individuals to feel safe to challenge	Critical	Critical
e) Ensure that the SSMP has access to the resources required to carry out their roles	Clear	Critical
f) Offer an induction to the organisation as a critical part of embedding a new SSMP	Marginal	Critical
g) Be safe enough to allow for personal and interpersonal risk taking, without the fear or mistakes being punished	Clear	Clear
h) Provide the elements necessary for team functioning e.g., offer time, resources and objectives	Clear	Clear
i) Ensure that the SSMP has access to internal support systems e.g., HR, line management	Clear	Clear
j) Facilitate team learning: engage in a cycle of briefing and debriefing	Clear	Clear
k) Offer opportunities for the SSMP to integrate with staff and athletes fully	Clear	Clear
l) Offer functional leadership to the SSMT	Clear	Clear
m) Offer opportunities for SSMP to develop alongside other disciplines/in an IDT	Clear	Clear
n) Offer the SSMP time to embed into the performance environment	Clear	Clear
o) Offer structured management to the SSMP e.g., named line manager	Clear	Clear
p) Offer opportunities for technical development within each discipline area of the SSMT	Clear	Clear
q) Offer support around the challenge for those who hold multisport delivery roles	Clear	Clear
r) Be a positive performance environment to operate in	Clear	Clear
s) Ensure that the SSMP has access to external support systems e.g., mentors, peer groups	Clear	Clear
t) Offer opportunities for non-technical development within each discipline area of the SSMT	Clear	Clear
3. Operation & Role: SSMPs require		
a) Support on how best to engage with stakeholders	Clear	Clear
b) Opportunities to practice delivery in relevant contexts i.e., valid and authentic situations	Clear	Clear
c) Exposure to the athletes and coaches	Clear	Clear
d) Support to build professional relationships	Clear	Clear
e) Responsibility and opportunity to direct personal objectives	Clear	Clear
f) Leadership e.g., effective and efficient guidance towards shared and individual objectives	Clear	Clear
g) Support in developing buy-in to their delivery models	Clear	Clear
h) Clarity regarding their role	Clear	Clear
i) Exposure to the environment (to build an appreciation)	Clear	Clear
j) Valid and authentic opportunities to actively engage in their technical development	Clear	Clear
k) Valid and authentic opportunities to actively engage in their non-technical skill development	Clear	Clear
l) An understanding on how their success will be measured	Clear	Clear
m) Clarity regarding expectations for each SSMP	Clear	Clear

n) Internal forms of support i.e., from those in the organisation; line managers, SSMT, leadership		
o) Exposure to other staff members	Clear	Marginal
p) Support managing organisational challenges	Clear	N/A
4. Operation & Role: SSMTs require		
a) Leadership i.e., a level of influence and guidance which enables the effort of all towards a goal	Clear	Clear
b) Clarity of purpose	Clear	Clear
c) Guidance, feedback and debrief	Clear	Clear
d) A shared understanding of the team's objectives	Clear	Clear
e) A philosophy of sharing around roles, knowledge, skills & experience	Clear	Clear
f) A shared understanding of a team members skills & attributes	Clear	Clear
g) A functional leader	Clear	Clear
h) A shared understanding of fellow team members roles	Clear	Clear
i) An optimised environment for interpersonal interaction	Clear	Clear
j) A shared understanding of a team members interaction styles & ways of working	Clear	Clear
k) Effective Team building – task focused	Clear	Clear
l) Opportunity to practice as a team – authentic and valid	Clear	Clear
m) A shared understanding of how team performance will be reviewed and measured	Clear	Marginal
n) Time to develop non-technical skills to support team functioning skills e.g., an ability to support others and their roles, communication, conflict management and team leadership	Marginal	Clear
o) Effective Team building – social	N/A	Clear
5. Operation & Role: SSM Leaders need to offer		
a) Feedback on personal delivery	Clear	Clear
b) Support to the SSMTs decision making processes	Clear	Clear
c) Support to the SSMP to understand the sports requirements	Clear	Clear
d) Support to the SSMP to develop self-awareness	Clear	Clear
e) Afford team members the space and time to collaborate effectively	Clear	Clear
f) Support to the SSMP around the development and maintenance of professional relationships	Clear	Clear
g) Support to the SSMP in decision-making processes	Clear	Clear
h) Guided learning i.e., offer support from their own &/or others experience to aid and advance individual or teams learning	Clear	Marginal
i) Support to the SSMP to understand the sports ways of working	Clear	Marginal
j) Structural support to collectively engage in a cycle of briefing and debriefing	Marginal	Clear
k) Opportunity to deliberately practice delivery as an individual in a pressured environment e.g., at a simulation event	N/A	Clear
l) Opportunity to deliberately practice delivery as a staff team e.g., at a simulation event	N/A	Clear
6. Essential skills (Recruitment criteria/principles)		
a) An ability to adapt their delivery models to fit the context and environment	Critical	Clear
b) An ability to work as part of a team	Critical	Clear
c) Experience in high performance settings	Critical	Marginal
d) An ability to work under high pressure	Clear	Clear
e) Judgement and decision-making skills	Clear	Clear
f) Strong non-technical skills	Clear	Clear
g) Technical ability	Clear	Clear
h) An ability to reflect on their practice	Clear	Clear
i) Strong interpersonal skills	Clear	Clear
j) An ability to support team functioning e.g., manage conflict, take on leadership	Clear	Clear
6.1 Interpersonal skills SSMPs require		
a) An ability to work with others/sustain effective working relationships	Clear	Clear
b) Communication skills	Clear	Clear
c) Engagement skills	Clear	Clear
d) An understanding of how to build effective relationships	Clear	Clear
e) An ability to influence across a range of stakeholders	Clear	Clear
f) Good self-awareness	Marginal	Clear

Key: Critical – > 70% consensus 8–10 (>very important) & > 55% absolutely critical or 10, Clear - > 60% consensus 8–10 (>very important).

Marginal - < or equally to 50% 8–10 (>very important).

N/A - < 45% 8–10 (>very important).

importance across both groups. The other was a principle related to the performance environment – the importance of feeling safe to challenge. In fact, all principles related to the creation of an environment which felt ‘safe’ to operate in – allowing individuals to feel safety to contribute, challenge and learn, and feelings of being accepted and respected – were clearly important across both groups. High levels of agreement also suggest a clear set of skill and developmental requirements for SSMPs to support their delivery – including an ability to adapt their delivery model to requirements, to work effectively as part of a team, and to possess and develop non-technical, and a number of interpersonal skills (related to relationship development and management, communication, engagement and influencing).

Round Two and Three

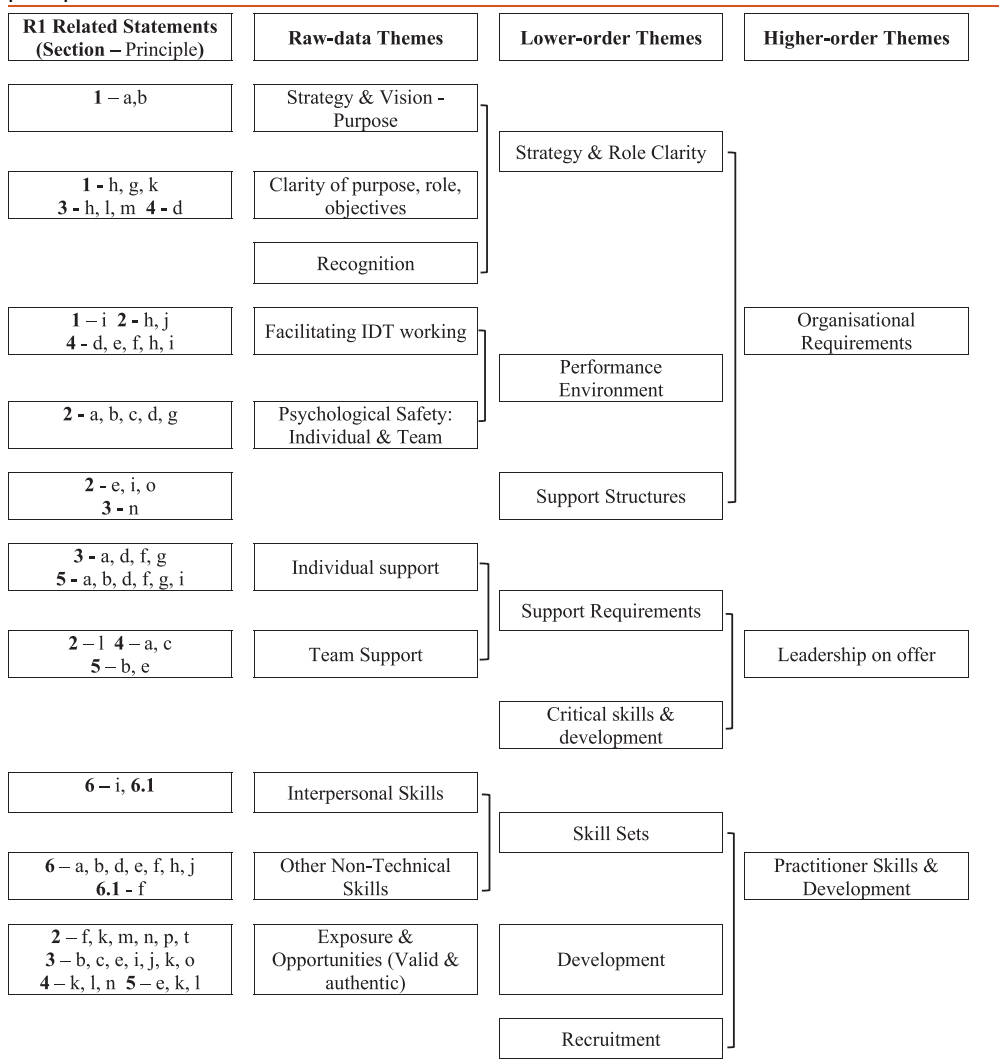
In Rounds Two and Three findings elucidated those from the survey, adding richness and depth – further reflecting the high levels of consensus, the large number of principles identified for consideration and adding operational insight. Importantly, when asked their views on the survey results and principles included – all agreed it was comprehensive and reflected the complex nature of leading people and teams in pursuit of SSM delivery.

Table 2 presents the collective (i.e., from both groups) qualitative data themes derived from the interviews and focus groups and the link to the Round One data (see supplementary material highlighting key quotes in relation to themes). The three higher order themes presented aim to distil the plethora of principles captured into core areas for consideration: organisational requirements, the leadership on offer, and the skills and development opportunities for each SSMP. There were some emergent themes which were either not captured or did not achieve consensus after Round One – namely, recognition, leadership skills and development, and recruitment. We discuss the standout principles within each of the higher order themes, the emergent themes, and the key operational considerations captured below.

Organisational requirements

Consensus across rounds suggests the key organisational requirements critical to support the SSMP and SSMT are; the provision of an organisational vision; optimisation of the performance environment; and a solid support structure – focused on clear leadership, structured management, and the necessary resources (i.e., time, equipment, physical environment). Clarity around the formulation and dissemination of an organisation’s performance vision and strategy supports the direction, focus and alignment of both the SSMT and SSMP’s individual delivery, but also provides a point of accountability. Participant E highlighted the impact of this suggesting “you need real clarity of vision, or purpose, because that gives you a reference point for people to make decisions against ... The stronger that is, the easier it is for people to operate with economy”. Operationally, it was felt the organisation had a key role in setting and disseminating the vision, and that leaders have a role in deciphering what is meant for the SSMT and SSMP – their objectives and models of delivery. The participants placed shared emphasis on clarity around roles and expectations, suggesting it is optimal when core elements of team and individuals

Table 2. Thematic Overview - Key data themes from round two and three with related round one principles.



share role clarity, objectives and success criteria which are aligned to the overall vision and strategy of the SSMT.

Creating and maintaining an effective performance environment supports GP delivery, with key facets including optimising and facilitating interdisciplinary team (IDT) working and the creation of a ‘safe’ environment. Participant I suggested that “facilitating the IDT working is crucial, it doesn’t happen by itself, and it needs some careful work. I think you’d be lucky in an environment where performance support all actively collaborate together.” The importance of working as a team, and support for this as highlighted in the quote, was deemed vital to enable GP and a relevant consideration for the organisation. Several areas were considered important in the support of optimal team functioning including leadership, resources, organisational structures, role clarity and the provision

of a 'supportive' performance environment. Participants also emphasised the importance of a philosophy of openness and sharing, and a mutual understanding of objectives, roles, skills and operational styles as key requirements for team performance.

The creation of an environment that was 'safe' to operate in was linked to both team and individual performance. All participants positively associated feeling safe with personnel who were willing to take measured risks and be creative in their practice. This aligns closely with research on the construct of psychological safety and its link to performance teams (e.g., Frazier et al., 2017). Operationally, the importance of a leader and an organisation that supported, modelled, and positively encouraged this approach is clearly evident and highlighted by participant C.

[A performing team is] ... one that is willing to take calculated risks, is willing to explore new things as a group and be excited rather than frightened by it. But it takes a certain type of leadership at the top to allow people to do that.

However, participants spoke about the challenges associated with achieving psychological safety, which was dependent on context, the individuals involved and coupled with the need – in high-performance sport – to maintain an edge (so, safe but not soft!). This is exemplified in the quotation below.

Safe to learn, contribute, challenge; to me those things sound like they are requirements of working conditions, but I think those things can look dramatically different but still exist. So, I can work for a real hard arse but still feel respected and ok, we are grown-ups, and it is serious work so there is an obligation to not be too delicate. (Participant L)

Leadership on offer

The provision of a functional leader is clearly important for both the SSMP and SSMT and Rounds Two and Three gave depth to the core requirements of those leading. For the SSMP the important elements of leadership were focused on operational support to delivery and personal development, as captured by participant B – "I think the biggest value of leadership is around that check and challenge, supervision, checking decision making as much as it is about development." A requirement to adapt and refine the leadership offer across the SSMP's journey was also noted by many. Support for the development of role clarity, service objectives and delivery models is apparent, but these facets are required to be aligned with the client's requirements and deemed essential on an SSMP's entry to a role. Assistance in identifying and navigating challenges in service delivery, with the attendant implications this brings to the SSMPs personal development needs was also important.

The provision of personal feedback regarding their service delivery (positive and negative); coaching and support to reflect; educational opportunities to develop non-technical skills – including self-awareness (SA) and PJDM, were all deemed to be essential in the support of SSMP's personal development. When installed successfully, these elements facilitated the learning and the development of functional professional relationships and models of delivery.

I'll often have a role in counselling, listening, problem solving with the practitioner. Helping reflect on what's happened, how they could approach it differently, what are we going to do about the next engagement? So, there is ongoing *in action* support for them. (Participant A)

This quote highlights the elements and the importance of this role, for the leader, in supporting the SSMP and their delivery.

For the SSMT consensus views suggest leaders have a role in encouraging, supporting, and leading the *optimal* team performance environment. The provision of time, resources, and structures to optimise collaboration is essential to this. Some simple internal support measures, such as having a physical location for co-working to optimise exposure and formalising regular and led IDT meetings support delivery.

We have performance meetings with structured agenda [discussing] what are we going to improve? what's our decision-making processes? what's the team based reflective piece on the programme? There are different touchpoints but within all of those [we] put in reflection and learning. (Participant M)

As exemplified in the quote above leaders who enable and support the team to review service delivery objectives, and unpack the complex decision making facilitate individual and organisational learning – provided there are opportunities (time and structure) for guidance, feedback and debriefs to occur.

Practitioner skill and development

Results in Round Two and Three offer further support into a clear set of skill and developmental requirements for SSMPs. Participants agreed that technical skill, whilst important, would only go so far to support optimal delivery. Participant B emphasised this when describing that “most of the time when you see it go wrong it's not technical ability it's practitioner's interpersonal skills, how they fit into the environment, how they deal with coaches, how they deal with themselves.” This quote emphasises the need for well-developed interpersonal skills to support the formation and maintenance of positive professional relationships. The need for an awareness of others' roles and agendas, and an ability to reflect, decision make, act and adapt to complex and changing environments – both on personal delivery and in response to others – was also deemed essential. The challenge for SSMPs and their skill sets is highlighted in the quote below:

There are multiple paths to success, but also to failure, and you're making judgements on what looks like a likely path to success and what to be avoided. Someone might choose to do it differently with more or less success. So, there is always a sense of uncertainty ... being comfortable with uncertainty and open to different approaches is important. (Participant A)

Regarding SSMP development – participants agreed that exposure and authentic opportunities for development are the crucial elements in supporting GP. Exposure to relevant others supported the development of critical professional relationships, and exposure to the environment was linked to an improved ability to make informed decisions on delivery. The idea of deliberate exposure to the environment was linked to the concept of effective transition into a role, where a delicate balance of exposure was overseen by leaders as per the quotation below from participant L:

We need to be reasonably careful about how we bring [SSMPs] into the real world of campaigns. We would think about the cycle, the role, and how we work them to test whether they have the ability to be a hands-on or need to sit back a while longer.

It was widely agreed that opportunities for development of both technical and non-technical skills in their respective teams (interdisciplinary), and within their disciplines (intra-disciplinary) was also key. As was access to a group of significant others (e.g., peers, mentors, supervisors, coaches) who offer opportunity to develop technical expertise or support learning and PJDM. Operationally, there was a spectrum of ideas as to the responsibility of the leader in directing SSMPs development however, all discussed a key responsibility of the SSMP to direct their own opportunities to develop.

Emergent themes and operational insights

Several emergent themes and operational insights were captured in the qualitative rounds. Firstly, many participants noted that the situational context of the organisation, sport, or role might lead to differing opinions regarding what the focus of support should be at any given time. This is highlighted by participant A, who said “Everything on the [survey] is important, and there is an element of the context that you are working in which brings some of these more to the fore than the others.” This has implications for the level of consensus obtained in some areas.

Consequently, core elements of support for both the SSMP and SSMT will vary dependent on the context, and a need to select and focus on the optimal areas becomes an essential operational consideration. For example, some context specific differences explained the lower consensus in the leadership requirements initially found after Round One. Differences could be dependent on the level of SSMP (neophyte or experienced), their employment status (contracted vs full time), the nature of the teams (e.g., disciplines included, transient nature, focus of delivery), and thus lead to different leadership behaviours and delivery priorities. Despite the potential variations seen across contexts, many of the standout principles for support above were deemed to be critical and featured regardless of delivery setting.

Secondly, whilst statements based on reward in Round One did not gain consensus of support after Round Two it became evident that the word “reward” sat uncomfortably for some. This was mainly due to the link with financial recognition and the challenge in providing this. Despite this, the importance of recognising the contribution of both individuals and teams was noted by all participants, as evidenced in the quotes below:

The reward is rewarding work, inclusion and feeling part of something, for longevity that’s important. Its [about] encouraging better engaged staff who are understanding of their value and feel like they are contributing to something bigger. (Participant A)

It’s good for a motivational perspective for the whole team, it’s good for setting standards, for providing recognition and promoting and striving towards excellence. (Participant I)

Operationally, it was clear that recognition should be a critical consideration for those leading teams and organisations, and importantly needed to be perceived as authentic and linked to the organisation’s objectives to be considered effective.

Other notable insights were linked to recruitment and induction of staff. The importance of effective recruitment for the key skill sets emerged. Solid recruitment processes, focused on ‘fit’ and assessing the critical non-technical skills seemed to reduce the chance of misalignment occurring between the SSMP and role – with the attendant benefits that result. In Round One induction was a considerable area of difference between groups

(critical vs marginal). When explored further, insights from the Australasia group suggested inductions, with both formal (e.g., processes) and informal (e.g., how people work) elements, gave SSMPs the best opportunity to select optimal delivery models effectively and swiftly, as highlighted below.

If you just bring someone in and say ok away you go, they don't know who to go to for what, they might not realise why things are being done a certain way for a reason, they might not know channels of communication or reporting lines and all these sorts of things can mean they step on people's toes, and it takes time. So, onboarding is key. (Participant M)

Within the European group less importance was given to this principle of support, most suggested whilst important it would be a lower priority in comparison to other support considerations. This difference may well be related to context and its impact on the assessed priorities as noted earlier.

Finally, despite leadership clearly being an important area of support, the complexity of providing leadership across the dynamic of a team was highlighted by participant C:

You've got to be across the entire mood in the place to see if everybody is on task and everybody's mindset is right. You're going to get that right and wrong some weeks. The more experience you have with a group and doing the job – you progressively get better at that, giving confidence when they need it or eradicating complacency if it is there.

Whilst the importance of experience was captured a critical set of required leadership skills also emerged from all participants. Interpersonal skills and leadership style were critical, due to the nature of the role in working with people. Effective leaders seemed to have a good awareness of self, of the people in their team, and an ability to respond in an individualised manner – this included the effective delivery of feedback. The operational importance of offering training and development opportunities for leaders was also noted – and was often considered lacking by participants.

Discussion

The rich picture of data collected allows us to offer key findings and operational implications in support of GP delivery for both SSMPs and SSMTs. Firstly, there are a plethora of important support principles to consider which we have been able to refine, give some sense of priority to, and distil into core areas for consideration; specifically, organisational requirements, leadership and SSMP skills and development. The expert consensus obtained through three rounds of investigation provides a level of confidence for the number and type of areas critical for consideration, with limited psycho-social variations seen between the regions – although important to note that consensus across these regions may partly be due to similarity in sporting systems and backgrounds (i.e., a western culture with strong links regardless of geographical proximity).

The important role of organisations and leaders in supporting GP is clear, offering support to previous literature (Alfano & Collins, 2023), and extending insights from other areas into this domain (e.g., Giardili et al., 2023; Wagstaff et al., 2015). Importantly, the comprehensive set of guiding principles captured for consideration in support of GP for SSMPs and SSMTs offer a novel, empirically underpinned and practical starting point for those employing, leading and delivering SSM provision. For example, the guidelines may be used on an SSMPs entry to a role – directing areas of considerations from how

the SSMP is inducted and the information, exposure and support they require; to how they determine role clarity, objectives and their delivery model; and how their interpersonal delivery is developed and supported.

Notably, we captured a number of operational considerations to support the application of these principles. Perhaps most critically the areas of support that are most important, or require most attention, seem to differ dependent on situational context. This suggests that the implementation of a set of principles, however carefully derived, will not result in SSM GP. Indeed, there is clearly a need to understand the situational requirements, be able to select the optimal areas of focus, and understand the mechanisms behind the principles of support provided. This, alongside the other operational considerations captured has key implications for those in leadership roles. Leaders will need to consider the critical areas of support they want to offer both the SSMT and the SSMP. Elements of leadership delivery style, or the *how* of their delivery will also be critical, and whilst select performance sport literature suggests that the traits and style a leader displays impacts wellbeing and performance (e.g., Cruickshank & Collins, 2015), extending this into the SSM delivery domain is novel. Whilst some clear requirements for the optimal leadership of a SSMT and SSMPs are captured (e.g., the provision of guidance, feedback, debrief and recognition, support to PJDM and relationships), the variety in those suggests a complex delivery space requiring leaders with high level interpersonal and coaching skills, and expertise in PJDM. Additionally, findings highlight the often limited development on offer for the SSM leader, suggesting employing organisations need to give consideration to how leaders are recruited, educated, supported and developed.

Findings offer further support for the importance of several theoretically grounded constructs, such as role clarity, PJDM and psychological safety, in relation to GP delivery (see Alfano & Collins, 2023). However, understanding *how* they are operationalised for optimal effect is key. For example, whilst psychological safety emerged as a salient construct and much previous literature exists on its use in optimising environments (see Frazier et al., 2017, for a comprehensive review), it should be considered against more recent criticism in its operationalisation in high performance sports settings (cf. Taylor et al., 2022). With a level of rigour and disagreement seemingly important for SSMPs and SSMTs to be effective (safe but not soft!), and variations in personal views of the construct evident, consideration still needs to be given as to *how* psychological safety is encouraged and supported appropriately – extending the operational considerations for the SSM leaders.

Finally, for the SSMP specifically, and in line with previous literature (Alfano & Collins, 2023; Arnold & Sarker, 2015; Martindale & Collins, 2013), findings support the importance of IDT working, non-technical skill sets – including interpersonal and PJDM skills, and the positive impact of functioning professional relationships on GP. The SSMP should recognise and take responsibility for developing key skill sets, seeking exposure, role clarity, authentic development opportunities and engage a wide network of support options; SSMPs who take on leadership opportunities in their delivery capacities should also consider the principles of support offered.

Limitations and conclusions

Whilst this study does add to existing literature by offering insight and consensus from experienced leaders from two geographical locations, it is however, a limited sample.

For example, differences between the groups may be accounted for with procedural ways of working due to the limited breadth of background within the regions. We must therefore be cautious in making generalisations from the data; there will undoubtedly be omissions with only western regions represented, and regrettably no female participant's perspective is offered, either. However, it is important to acknowledge that the population of qualified participants is and of itself small. As with so much research, further exploration is warranted.

These limitations and the contextual considerations notwithstanding, the rich picture of data gathered, including expert consensus and divergence, supports a comprehensive set of principles for consideration in the leadership, direction, and operation in support of GP for SSMPs and SSMTs. The development of a set of principles, key areas of focus and the emergence of some operational considerations in support of SSMPs and SSMTs is entirely novel. Findings add to the current literature on offer, extending recent research into cross discipline GP (Alfano & Collins, 2021, 2023), and insight and constructs from wider organisational management literature (e.g., role clarity, PJDM, psychological safety, leadership) into the SSM delivery domain – another new concept. With this in mind we suggest that these support insights may be of interest and extended to supporting teams and individuals in any complex, dynamic setting.

As the number of roles and operating SSMTs expands, the findings gained may be of use to both organisations and leaders, supporting their ability to rank, prioritise and select areas of support to consider and optimise dependent on context. It is important to note here that clarity of vision and purpose will guide decision making; for example, an outcome focused medal winning purpose, versus one of developing a pool of robust, competitive athletes may require a different focus for the SSMP and SSMT, and markedly differing support needs. Findings also have key implications for the SSMP in relation to their skill sets, development and perhaps expectations of support. In closing we should stress that although much might seem common sense, it was notably seen by our participants as uncommon practice! If SSM support is important, then it is equally important that it is well led, organised, and facilitated. Consequently, we are planning a more detailed review of these implications in support of this proposition.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

Data availability statement

The authors confirm that the data supporting the findings of this study are available within the article [and/or] its supplementary materials.

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