

# Defining and Measuring Self-Presentation Concerns in Sport and Exercise: A Conceptual Paper

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## Abstract

Self-presentation concerns (SPC) refer to individuals' fear of being negatively evaluated by others, particularly by peers or valued audiences. In sport and exercise contexts, SPC are especially significant, as they help understand key psychological phenomena such as performance anxiety, choking under pressure and exercise participation. Despite their importance, research in this area faces persistent challenges that limit theoretical and practical advancements.

This conceptual paper provides a critical synthesis of research on SPC in sport and exercise, addressing three key areas that emerged from an exploratory analysis: 1) the ways in which SPC are defined and conceptualized, including a new definition; 2) a review of commonly used measurement tools; and 3) an assessment of these tools, identifying methodological gaps and providing recommendations for future assessment development.

Through a new definition and the development of a knowledge map, this paper provides a structured framework that clarifies the conceptual landscape of SPC in sport and exercise. This foundation highlights both consensus and divergence in the literature, supporting future research and practical application.

**Keywords:** *Self-presentation Concerns, Social Evaluation, Athlete Behaviour, Exercise Behaviour*

## Highlights:

- Introduces a context-specific definition of SPC in sport and exercise
- Proposes a knowledge map to organize SPC-related constructs
- Identifies three dominant SPC measurement domains in current research
- Critically evaluates existing instruments and calls for consolidation
- Outlines a research agenda for empirically refining the SPC framework

People care about how others perceive them. Impressions made on others are a key aspect of social interaction and play an important role in achieving desired outcomes (Goffman, 1959). In contexts such as social gatherings or job interviews, being perceived in a particular way can significantly influence future opportunities. To reach their objectives, people often adjust their behaviour to convey specific impressions to individuals or groups (Leary, 1992). This deliberate effort to project a desired image is known as *self-presentation* (Schlenker, 1980). When individuals doubt their ability to convey a desired impression, they may experience social anxiety (Gammage, Martin Ginis, et al., 2004), also referred to as "*evaluation anxiety*" (Beck et al., 1985). Baumeister (1982) described a closely associated construct - *self-presentation concerns* (SPC) - which refers specifically to individuals'

concerns about how they are perceived and evaluated by others.

The motivation to engage in self-presentation varies; individuals tend to invest more effort in appealing to target groups that matter to them, while showing less concern for other audiences (Geukes et al., 2013a). Geukes et al. (2013a) distinguish between a broader, more general form (*self-constructive self-presentation*) and an audience-specific form (*audience-pleasing self-presentation*). While self-constructive self-presentation refers to a general desire to present oneself in a favourable way, audience-pleasing self-presentation focuses on presenting oneself in a positive way to a specific group, in accordance with its values and ideals. By presenting ourselves in the desired way, we aim to achieve goals such as being perceived as successful, generous, capable, or knowledgeable by the

members of this group. These dynamics are particularly salient in sport and exercise settings, where public scrutiny and performance pressure are common (Prapavessis et al., 2004; Schlenker et al., 1982).

In sport, people display abilities and attributes, such as their skill level, physical fitness, or ability to handle pressure - to various audiences, including coaches, teammates, training partners, fans, and in some instances even the general public (Martin Ginis et al., 2007; McGowan et al., 2008). These evaluative settings have the potential to elicit concerns about how one appears or performs relative to others. Such pressures can motivate greater effort and persistence but may also heighten anxiety when athletes fear negative judgement.

Exercise settings, such as gyms, fitness classes, and recreational sport venues, provide environments where individuals engage in structured, goal-directed activities aimed at enhancing health, performance, or personal well-being. These contexts can evoke similar yet more personal forms of self-presentation concerns. Exercise participation has been linked to the expression and reinforcement of valued identities (Martin Ginis et al., 2007). One important aspect is the motivation to claim the identity of an athletic person (Grove et al., 1982), since athleticism is often met with significant attention, praise, and other social rewards (Leary, 1992). The desire to be seen as physically attractive or athletic can serve as a strong motivator for maintaining a regular exercise routine (Martin Ginis et al., 2007), yet may also deter participation when exercisers feel unable to meet perceived standards.

There are several reasons that motivate people to create a desired impression in both sport and exercise contexts. Given these shared social and motivational dynamics, the present paper examines sport and exercise within a single conceptual framework. As Dimmock et al. (2020) note, self-presentation is a pervasive process through which individuals monitor and control how they are perceived. Being categorised as an athlete or exerciser can yield social benefits - but also evaluative risks when such impressions are threatened. Eklund et al. (2023) likewise emphasise that self-presentational imperatives pervade both sport and exercise, shaping how self-concept, self-esteem, and emotions such as anxiety, pride, or shame evolve through participation. These processes influence cognition, emotion, and behaviour in training, competition, and everyday exercise alike, reflecting a shared psychological foundation in managing social evaluation.

The present paper focuses specifically on self-presentation concerns (SPC) and their influence on behaviour, emotion, and experience in sport and exercise. Its scope is to synthesise and organise existing definitions, antecedents, and consequences of SPC across both domains, and to evaluate how these concerns have been assessed in past research. Building on this foundation, the paper revisits existing definitions and integrates prior evidence into a refined conceptualisation of SPC, supported by a comprehensive knowledge map developed from the broader literature, and outlines conceptual and methodological implications for future research.

### State of Research

The relationship between SPC and anxiety has been widely examined across different settings in both sport and exercise. Turning first to sport, Leary (1992) suggested that "competitive anxiety [...] revolves exactly around [the] self-presentational implications of competition (p. 47)." Research supports this link, showing that SPC and competitive anxiety contribute to performance

breakdowns, such as choking under pressure (Ehrlenspiel et al., 2020; Mesagno et al., 2011). This connection applies to both trait and state anxiety, as athletes with higher SPC tend to experience heightened competitive anxiety in pressure situations (Bray et al., 2000). Mesagno (2009) proposed a self-presentation model of choking, explaining how SPC can lead to performance disruption under pressure. When performing in high-stakes environments, athletes may experience heightened public self-awareness, causing them to focus excessively on how they appear to others while fearing negative evaluation (Mesagno et al., 2011). This impression-related uncertainty may intensify anxiety, particularly when individuals begin to question their ability to appear competent or composed under pressure (Mor et al., 2002). These disruptions align with attentional models of choking, which suggest that "when anxiety increases, athletes divert attention to either internal (i.e., movement-related or emotion-focused) or external (i.e., environmental) irrelevant cues, instead of maintaining optimal attention" (Mesagno et al., 2017, p. 171). Research further suggests that SPC-related anxiety negatively impacts sport performance, particularly in tasks requiring fine motor skills (Leary, 1992). SPC appear to have a stronger effect on cognitive state anxiety than on somatic anxiety, suggesting that cognitive processes such as worry, self-doubt, and intrusive thoughts play a particularly important role in performance breakdowns (McGowan et al., 2008).

While self-presentation typically refers to behaviours aimed at conveying a desired image, self-presentation concerns (SPC) reflect an individual's worry that these impression-management efforts may be unsuccessful. Turning next to exercise settings, feelings of being observed or evaluated are quite common (Martin & Fox, 2001). As a result, the fear of making a negative impression, such as appearing out of shape, uncoordinated, or inexperienced, can deter some individuals from engaging in physical activity altogether (Martin, Leary, et al., 2001). Just as in sport settings, SPC in exercise contexts can contribute to social anxiety, particularly in the form of *social physique anxiety (SPA)* (Martin Ginis et al., 2007). SPA arises when individuals feel like their bodies are being evaluated by others, whether real or imagined (Hart et al., 1989). Certain populations may be especially vulnerable to SPC and, consequently, more likely to experience SPA. For instance, research suggests that adolescent females are particularly susceptible, as their bodies naturally increase in body fat during development while societal norms continue to emphasize thinness (Prapavessis et al., 2004). Studies by Crocker et al. (2000) and Martin Ginis et al. (2007) support this, highlighting how SPC can shape body-related anxiety and self-perception. Beyond psychological effects, SPC-driven anxiety can also influence behaviour in such exercise-specific settings. Brewer et al. (2004) found that exercisers with high SPA "tended to express a preference for exercise studio floor positions away from the instructor and report wearing concealing apparel to their exercise classes" (p. 52). This suggests that SPC not only heighten anxiety but may also shape participation patterns and, in some cases, discourage individuals from exercising altogether.

In sum, SPC appear to play a significant role in shaping individuals' experiences, motivations, and various forms or dimensions of anxiety across sport and exercise contexts. Whether in competitive or recreational environments, the desire to manage one's image can contribute to performance anxiety, influence participation, and even impact long-term engagement in physical activity. A deeper understanding of these dynamics could

provide valuable insight into the psychological factors that drive behaviour in these settings.

### Persistent Challenges

Despite their impact on behaviour and experience, SPC in sport and exercise remain conceptually underdeveloped. Self-presentation and self-presentation concerns are closely linked, and limitations in how each is studied may also constrain the understanding of the other. Almost two decades ago, Martin Ginis et al. (2007) described self-presentation as a "hot topic among sport and exercise psychologists" (p. 151). However, they also noted that, despite growing interest, there had not yet been "an increase in substantive, cumulative knowledge about the role of self-presentation in sport and exercise" (p. 151). Thirteen years later, Dimmock et al. (2020), echoed this concern, emphasizing that the absence of a comprehensive theoretical framework still hinders progress. As a result, research efforts often lack coherence and direction, making it difficult to build an integrative understanding of both self-presentation and SPC. Martin Ginis et al. (2007) suggested that synthesizing research could provide a much-needed foundation for theory development, which would help bring greater structure to the field. Such a framework could, for example, offer clearer distinctions between self-presentation, SPC, and related constructs such as social anxiety, competitive anxiety, and self-awareness. It could also support a more systematic understanding of the factors that contribute to the emergence of self-presentational processes, as well as clarify their psychological and behavioural implications.

However, achieving this type of integrative overview is challenging due to the disjointedness of the literature, which makes it difficult to establish generalizable conclusions. Research has taken multiple directions, often focusing on specific aspects in different settings - from self-presentation tactics and behavioural consequences among athletes (Dimmock et al., 2020) to the effects of SPC on sport performance (Mesagno et al., 2011), or on impression management in exercise contexts (Conroy et al., 2000; Leary et al., 1995; Lindwall, 2005). This diversity in focus further illustrates the challenge of integrating findings into a cohesive framework.

Several factors may help explain why such a consolidation has yet to be undertaken. First, there remains some uncertainty as to whether SPC warrant investigation as a distinct construct, particularly given their overlap with more established concepts such as social and competitive anxiety. Researchers may also be deterred by the practical complexities involved: the literature is broad and often disconnected, and definitions and measurement approaches vary considerably. Second, any attempt to create a clearer conceptual overview would likely require significant time and resources upfront, including extensive literature mapping and carefully reasoned inclusion criteria. Without an established framework to guide this process, the initial investment is high, and the outcome may seem uncertain. Third, expert perspectives - gathered through qualitative methods such as interviews or Delphi studies - may be essential to navigate this complexity and build consensus. These are just a few of the challenges that may have contributed to the limited theoretical progress in this area and help explain why researchers have been hesitant to pursue a more integrative approach. As a result, substantial conceptual and empirical gaps remain despite a growing body of work, reflecting the absence of a unifying framework that draws these strands together.

These gaps become particularly apparent when considering empirical work. Although evidence points to associations between SPC and psychological outcomes such as anxiety, these relationships have not been systematically investigated. In particular, the mechanisms and contextual factors that shape how self-presentation and SPC influence such outcomes are still largely underexplored. While some studies show that SPC can impact performance and psychological experiences in sport and exercise contexts, these effects may be moderated or mediated by additional variables. Factors such as gender, competition level, social context, and cultural norms have been suggested to influence the strength or nature of these effects (Dimmock et al., 2020; Martin Ginis et al., 2007). For example, self-presentation motives are commonly described in terms of two distinct forms: *acquisitive motives*, which reflect the desire to gain approval, and *protective motives*, which reflect the desire to avoid disapproval. These different motivational orientations have been shown to influence anxiety levels and performance under pressure (Howle et al., 2015a). However, such interaction effects have received limited attention to date, particularly in sport-specific contexts. Ehrlenspiel et al. (2020) emphasize this gap, noting that although SPC are theoretically and empirically linked to anxiety (Hudson et al., 2001; Wilson et al., 1998), few studies have directly investigated these connections. Wilson et al. (1998) further reference the contention by Leary (1992), that competitive anxiety may reflect a specific form of self-presentational threat in competition, but emphasize the need for experimental manipulations and longitudinal designs to establish causal inferences. In addition, some studies have explored SPC as an outcome variable, for example, by examining psychological predictors of SPC among competitive athletes (Thatcher et al., 2008) or investigating how SPC relates to pre-competition affect in adolescent football players (Podlog, Lochbaum, et al., 2013).

A further manifestation of the previously discussed fragmentation concerns the measurement of SPC. A variety of different measures are currently used, making it difficult to compare findings across studies. Each of these measures has strengths and weaknesses, contributing to inconsistencies in assessments. For instance, one widely used tool, the *Self-Presentation in Exercise Questionnaire* (SPEQ, Conroy et al., 2000) has been criticized for its limited validity in capturing impression construction and its underrepresentation of specific motivational processes (Dimmock et al., 2020; Motl et al., 2000). Without greater standardization and conceptual clarity in measurement, it will remain difficult to integrate findings and build cumulative theoretical insight.

In conclusion, research on self-presentation and SPC continues to face several persistent challenges. These include unclear definitions, an ambiguous conceptual status of SPC, and the absence of a comprehensive theoretical framework. In addition, there has been limited investigation into the mechanisms and contextual factors that shape how SPC may influence psychological outcomes. The literature also remains fragmented, with inconsistent terminology and varying measurement tools making it difficult to achieve a comprehensive overview. Notably, while SPC are often studied as predictors, we still know relatively little about the factors that contribute to their emergence. Taken together, these issues hinder theoretical integration and cumulative progress. Addressing them will be essential to develop a more coherent and impactful research agenda on self-presentation and SPC in sport and exercise contexts.

### Examination of Earlier Work

In response to the persistent challenges outlined above, we recognized the need for a more structured and integrative approach to understanding self-presentation and SPC in sport and exercise. Our main objective was to develop a knowledge map that could help organize the diverse perspectives and constructs in this field, thereby providing a clearer foundation for future research.

To achieve this, we undertook an exploratory mapping of the literature, examining how SPC in sport and exercise are defined, discussed, and operationalized. This narrative approach enabled us to capture key patterns and variations in the field, without being constrained by the strict criteria of a systematic review. Our process was intentionally broad, aiming to synthesize insights from a wide range of sources and to identify both convergent and divergent themes in the literature. Importantly, the three central areas that structured our analysis – 1) how SPC are currently defined in sport and exercise research, 2) which approaches and instruments are used to measure SPC, and 3), what strengths and limitations are reported for these tools – emerged inductively from this exploratory analysis, rather than being specified a priori.

### Search Strategy

A comprehensive literature search was conducted across six databases (ScienceDirect, SportDiscus, PsycArticles, Scopus, PubMed, and PubPsych/Psyindex). The search covered all available studies from database inception up to December 2022. This timeframe reflects when the original literature search was conducted and therefore defines the upper limit of publications included in this paper. Only studies published in English or German were considered, which may have limited the inclusion of relevant work in other languages. To enhance inclusivity, an additional search using Google Scholar identified 120 records. Detailed search terms and database-specific adjustments are provided in the online appendix. **Table 1** provides an overview of the search process across all databases, showing the number of records identified and retained at each screening stage. The selection process focused on studies that explored self-presentation and SPC definitions, measurement approaches, and related outcomes in sport and exercise contexts. **Appendix Table 1** summarises the universal and section-specific inclusion and exclusion criteria that guided study selection for definitions, measurement standards, and evidence assessment. General psychological studies on self-presentation without a clear connection to such settings were excluded, unless SPC were explicitly addressed or operationalized in the analysis. Our criteria also ruled out studies centred on psychological stress, illness, or commercial affiliations. The multi-stage search and screening process is illustrated in a flow diagram (**Appendix Figure 1**). The search yielded 29,155 records, which were screened at the title level. After deduplication, 881 abstracts were examined, leading to 157 full-text evaluations. Of these, 56 studies met the inclusion criteria, with forward searches contributing 49 additional studies, bringing the total to 105 contributions – all of which are listed in **Appendix Table 2**, which also indicates whether each study informed SPC definitions, measurement standards, or evidence on measures.

### Results

To structure the analysis and provide a clear basis for comparison, we organized the reviewed literature around three focal areas. As mentioned earlier, these areas

were not specified a priori but emerged inductively from our exploratory mapping of the literature. They reflect central challenges in the study of SPC and are intended to highlight opportunities for conceptual and methodological advancement.

First, we examined how SPC are currently defined in the literature. This assessment addresses persisting ambiguities and offers a foundation for sharpening theoretical boundaries. Second, we surveyed the main approaches used to measure SPC, focusing on variations in operationalization, scale design, and use across populations. Third, we evaluated the reported strengths and limitations of these tools, with particular attention to issues of validity, contextual applicability, and practical relevance.

The findings are presented according to these three areas: 1) defining SPC, 2) identifying current measurement standards, and 3) evaluating the strengths and limitations of these tools.

### Defining Self-Presentation Concerns in Sport and Exercise

While SPC are relevant across a range of domains, such as education, the performing arts, or public life, sport and exercise contexts provide a uniquely fertile ground for their examination. These settings are inherently social and evaluative, often closely tied to identity, competence, and self-worth. This combination makes them particularly well suited for studying how SPC are experienced and expressed.

The knowledge map served as a useful means of organising and integrating the diverse constructs, antecedents, and contextual influences associated with SPC, helping to impose structure on a field that has developed in a largely disjointed manner. Drawing on a synthesis of 37 studies, we developed a refined definition of SPC tailored to the sport and exercise context. While earlier sections discussed self-presentation and SPC jointly due to their conceptual overlap, the following analysis focuses specifically on SPC. This analytic focus reflects the need to distinguish SPC more clearly as a standalone construct with direct relevance for psychological and behavioural outcomes.

The knowledge map (**Appendix Figure 2 and 3**) was designed to visually organize the central antecedents, contextual factors, and domains of SPC as identified in the literature. Rather than serving merely as a supplementary tool, it represents a core output of our conceptual approach, developed to provide an organized and practical reference point for researchers in this field. While not intended as part of the formal definition, the map offers a heuristic perspective that illustrates how key elements interact in the sport and exercise context. **Appendix Figure 2** provides a high-level overview of how individual and situational factors combine to give rise to SPC, while **Appendix Figure 3** presents the full knowledge map, showing how traits, needs, situational stressors, and responses are organised in a single integrated framework. By visually summarizing the conceptual landscape, both versions of the map support researchers in identifying patterns, generating hypotheses, and situating their work within the broader field. Importantly, while the placement of elements does not reflect validated empirical relationships, it follows the logic and structure outlined in the conceptual section.

The definition of SPC proposed in this paper was derived through an inductive analysis of the included literature. We first identified all contributions in which SPC were explicitly defined or described, collating these passages and examining their common ground.



**Table 1: Detailed overview of the research approach across different databases and during forward search**

| Database               | Date of search    | Search terms (and filters)                                                                                      | Records found | Records identified (after reading title) | Records identified (after reading abstract) | Records selected (after reading full article) | Records referenced (definitions) | Records referenced (measurement standards) | Records referenced (evidence on measures) |
|------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------|---------------|------------------------------------------|---------------------------------------------|-----------------------------------------------|----------------------------------|--------------------------------------------|-------------------------------------------|
| ScienceDirect          | December 29, 2022 | "Self-presentation" OR "Impression Management" OR "Self Handicapping" AND Sport; (+ "Subject area: Psychology") | 7672          | 170                                      | 20                                          | 8                                             | 3                                | 3                                          | 4                                         |
| SportDiscus            | December 28, 2022 | Self-presentation OR Impression*OR Self* AND Sport (+English abstract, + peer reviewed)                         | 16864         | 461                                      | 50                                          | 27                                            | 6                                | 23                                         | 11                                        |
| Scopus                 | December 30, 2022 | Self-presentation OR Impression Management OR Self* OR Impression* AND Sport                                    | 716           | 55                                       | 24                                          | 2                                             | 1                                | 2                                          | 1                                         |
| PsycArticles           | December 30, 2022 | Self-presentation OR Impression*OR Self* AND Sport (+ peer reviewed)                                            | 2597          | 64                                       | 3                                           | 2                                             | 0                                | 1                                          | 2                                         |
| Pubmed                 | December 30, 2022 | ((self-presentation) OR impression management) AND sport                                                        | 164           | 17                                       | 12                                          | 1                                             | 1                                | 0                                          | 0                                         |
| Pubpsych /<br>Psyindex | December 30, 2022 | Self-presentation OR Impression Management AND Sport                                                            | 1022          | 100                                      | 15                                          | 1                                             | 1                                | 1                                          | 0                                         |
| Google Scholar         | December 29, 2022 | Self-presentation OR Impression Management OR Self* OR Impression* AND Sport                                    | 120           | 99                                       | 33                                          | 15                                            | 9                                | 5                                          | 7                                         |
| <i>Forward Search</i>  |                   |                                                                                                                 |               |                                          |                                             | 48                                            | 16                               | 0                                          | 32                                        |
|                        |                   |                                                                                                                 |               | 966                                      |                                             |                                               |                                  |                                            |                                           |
| Total                  |                   |                                                                                                                 |               | 29155                                    | Duplicates removed: 85                      | 157                                           | 104                              | 37                                         | 57                                        |

Notes: Several of the selected records are referenced in more than one category (definitions, measurement standards, evidence on measures).

These descriptions were then compared with the patterns represented in the knowledge map, particularly with respect to antecedents, contextual factors, and potential outcomes. Across studies, recurring elements included doubts about appearing competent, fears of negative social judgment, and concerns linked to physical appearance or exertion. Drawing on these shared themes, and building on foundational work by Baumeister (1982), Schlenker (1980), and Leary et al. (1990), we propose the following sport- and exercise-specific definition of self-presentation concerns (SPC):

*Self-presentation concerns (SPC) in sport and exercise are characterized by doubts or fears about successfully conveying a desired image in settings where individuals are evaluated by significant others such as coaches, teammates, instructors, training partners, peers, or spectators. These concerns often relate to core elements of sport and exercise participation, such as perceived physical competence, exertion, bodily appearance, or social standing within a team, group, or exercise community. SPC may become especially relevant in environments marked by public performance, social comparison, or appearance- and effort-related expectations.*

While this definition is tailored to the sport and exercise context, highlighting unique sources and targets of evaluation, the fundamental processes involved are likely to be relevant in other socially demanding domains as well. This conceptualization also aligns with Lazarus' (1991) cognitive appraisal model of stress, in which individuals assess 1) whether a situation holds personal or social relevance (*primary appraisal*), and 2) whether they possess the resources to manage its demands (*secondary appraisal*). In SPC, the relevance lies in the significance of social judgment, and the available resources relate to the perceived ability to manage impressions.

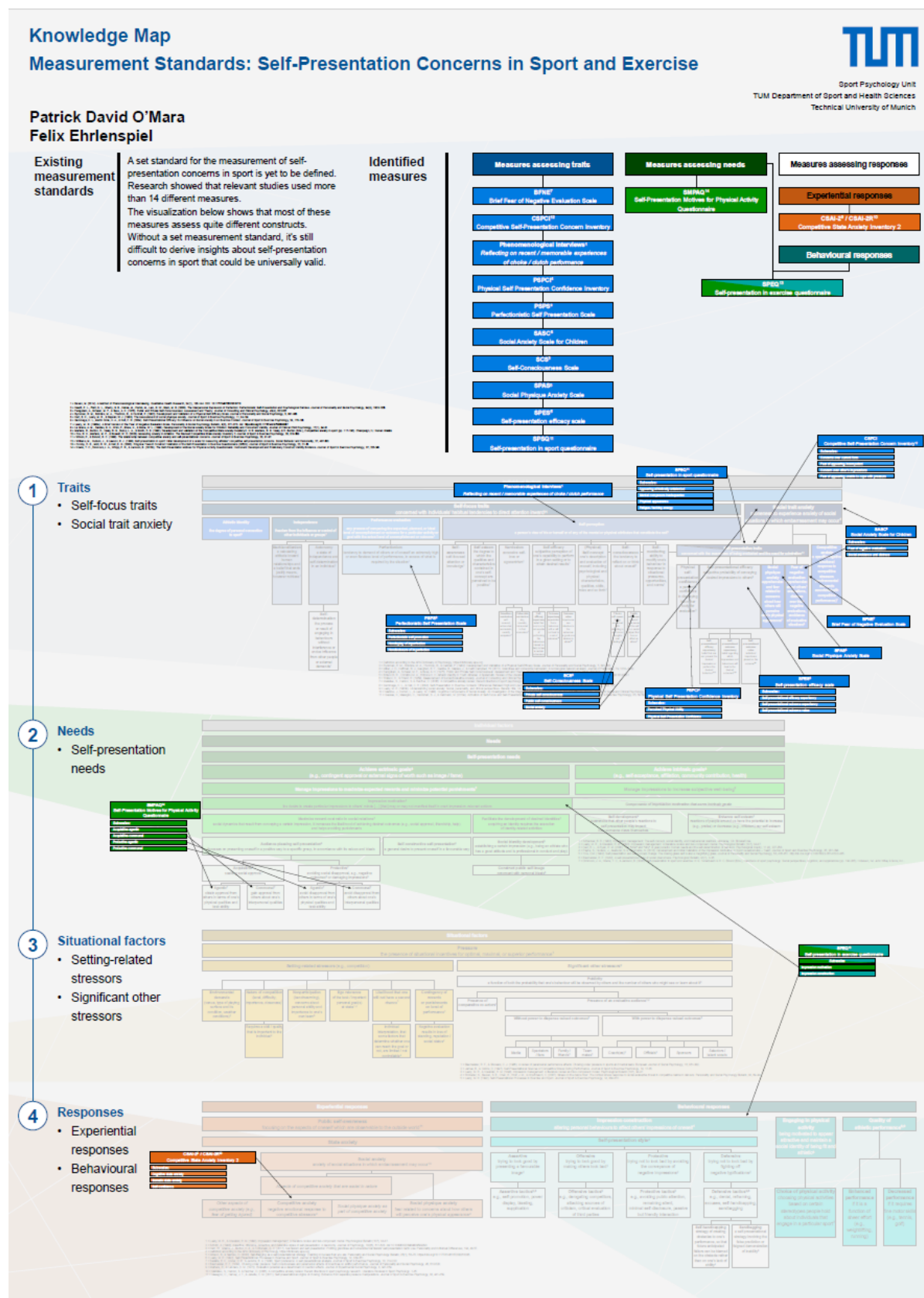
To further clarify which factors influence the emergence and intensity of SPC in sport and exercise, we attempted to consolidate the literature and eventually developed five empirically grounded categories: the 5S – *self-focus traits, social trait anxiety, self-presentation needs, setting-related stressors, and significant other stressors*. These categories were derived through an inductive mapping process in which all person-related and situational factors associated with SPC were collated, compared, and iteratively grouped. Overlapping constructs were consolidated, and recurring themes were identified across the reviewed contributions. The 5S framework provided the conceptual structure from which the subsequent knowledge map was developed, and it also informed the refinement of the SPC definition presented above. The following findings illustrate how the 5S capture relevant individual and situational influences:

- **Self-focus traits:** Traits such as perfectionism, self-awareness, and self-monitoring have been linked to SPC. For example, perfectionism has been found to correlate with SPC differently across genders, with males being more influenced by parental criticism and females by fear of mistakes (Thatcher et al., 2008). High self-monitors and individuals with heightened self-awareness appear to be more prone to SPC due to their increased focus on social cues and others' perceptions (Geukes et al., 2013a).

- **Social trait anxiety:** Individuals with high trait anxiety, particularly fear of negative evaluation, may be more likely to experience SPC in evaluative sport and exercise situations (Leary, 1992; Schlenker et al., 1982). Once SPC are triggered, these individuals could be more prone to experiencing social state anxiety in specific contexts. One such example that we mentioned earlier is social physique anxiety (SPA), which has been linked to SPC, particularly among women and adolescent females, where SPA correlates with body image concerns and self-esteem (Crocker et al., 2000; Hart et al., 1989). Similarly, competitive anxiety, driven by evaluative pressures in sport, has been associated with SPC and may contribute to performance disruptions (Ehrlenspiel et al., 2020; Leary, 1992).
- **Self-presentation needs:** SPC may be connected to the need to maximize rewards or avoid punishments, motivating individuals to manage impressions to secure social approval or minimize disapproval (Leary et al., 1990). These behaviours are shaped by two key motives – acquisitive (seeking approval) or protective (avoiding disapproval) – that influence persistence and anxiety in tasks (Howle et al., 2015b). Additionally, self-presentation could play a role in constructing desired identities, such as being perceived as skilled or competent (Schlenker, 1980).
- **Setting-related stressors:** SPC appear to be heightened in high-stakes environments where individuals are observed by evaluative audiences or must meet high performance expectations (Leary, 1992; Renfrew et al., 2017). Environmental factors, such as the nature of the venue or competition, contribute to performance pressure by increasing the public and evaluative aspects (Baumeister et al., 1986).
- **Significant other stressors:** The expectations of teammates, coaches, and other evaluative audiences contribute to SPC, particularly when these individuals hold evaluative power or control outcomes, as often seen in hierarchical relationships (James et al., 1997). Audience presence has been suggested to enhance performance on well-learned tasks but impair it on poorly-learned ones, reflecting the potential interaction between SPC and social facilitation (Zajonc, 1965). Additionally, critical figures such as selectors may increase the pressure to manage impressions, as their evaluative role and decision-making power could heighten self-presentation motivation and related stress (Leary et al., 1990).

The knowledge map developed from this synthesis provides a sport- and exercise-specific framework that visually and conceptually integrates these five categories. By structuring the 5S in relation to one another, the map supports systematic hypothesis generation, highlights meaningful gaps in the literature, and serves as a practical reference for future research in this area.

**Figure 1: Measurement standards: Self-presentation concerns in sport and exercise**



Note: For full readability of all elements, please refer to the high-resolution PDF version of this figure available as an online appendix.

## Current Measurement Standards

To evaluate current measurement standards for SPC in sport and exercise, we identified all instruments used in relevant studies within this field. When classified according to the type of SPC they assess, these measures cluster into three categories: 1) concerns specific to sport and exercise performance and participation, 2) concerns related to physical appearance, and 3) concerns about social evaluation or negative judgment by others. These categories therefore reflect the main ways in which SPC have so far been operationalised in existing research. Below is a selection of the most commonly used instruments, chosen based on their frequency of use (at least five mentions or applications) across these three main thematic dimensions. This approach ensures that the selected measures represent both the most established tools in the literature and the conceptual diversity of SPC as studied in sport and exercise. Other instruments that appear less frequently are included in the comprehensive overview in **Appendix Table 3**. It summarises which SPC measures have been used in empirical studies, alongside sample sizes and sport contexts, highlighting variation in the evidence base across tools.

- Sport- and exercise-specific concerns
  - Self-Presentation in Exercise Questionnaire (SPEQ) (Conroy et al., 2000) – used in 6 studies. This questionnaire assesses impression motivation and impression construction in exercise contexts. Internal consistency scores range from  $\alpha = .76-.85$ , though construct overlap between its subscales remains a concern (Brunet et al., 2011).
  - Self-Presentation Efficacy Scale (SPES) (Gammage, Martin Ginis, et al., 2004) – used in 6 studies. It measures self-presentational efficacy across three components: efficacy expectancy, outcome expectancy, and outcome value. Reliability is strong ( $\alpha = .84-.92$ ), though validation in diverse populations remains limited (Lamarche et al., 2013).
  - Self-Presentation in Sport Questionnaire (SPSQ) (Wilson et al., 1998) – used in 5 studies. This instrument focuses on sport-specific concerns (e.g., appearing unfit or untalented) and has demonstrated strong internal consistency across multiple versions, with reported alpha values ranging from  $\alpha = .82$  to  $.94$  (McGowan et al., 2008; Podlog, Gao, et al., 2013; Wilson et al., 1998). However, as noted by Divine (2012), the SPSQ does not capture certain sources of SPC, particularly those related to social influences such as significant others, competitive context, or environmental demands.
- Appearance-related concerns
  - Social Physique Anxiety Scale (SPAS) (Hart et al., 1989) – used in 5 studies. A scale that measures anxiety about body evaluation, with reliability scores ranging from  $\alpha = .62-.90$ . Factor structure variability across studies and

cultural groups limits its broader applicability (Motl et al., 2000).

- Social evaluation concerns
  - Brief Fear of Negative Evaluation Scale (BFNE) (Leary, 1983) – used in 5 studies. This measure focuses on anxiety related to social judgment. Internal consistency is excellent ( $\alpha = .80-.97$ ), but debates over its factor structure persist (Carleton et al., 2006).

The remaining, less frequently used tools include the Revised Competitive State Anxiety Inventory-2 (Cox et al., 2003) and qualitative approaches such as phenomenological interviews (Hill et al., 2017). A complete overview of all instruments reviewed is provided in **Appendix Table 3** in the online appendix.

**Figure 1** presents a second version of the knowledge map, overlaid with the identified measurement approaches and the constructs they target. This visualization highlights the fragmentation of the current measurement landscape, showing that most tools focus on specific traits (e.g., self-awareness, perfectionism), while situational or response-based components remain underrepresented. For example, widely used instruments such as the SPAS and SPEQ cover important aspects of SPC, but do not address the full range of relevant constructs, leaving critical areas unexplored.

**Appendix Table 3** also details the research contributions for each identified measure, including the types of sport investigated and participant numbers, thus providing transparency about the studies reviewed and highlighting the contextual diversity of SPC research.

## Supporting and Critical Findings on Measurement Standards

To evaluate the strengths and limitations of the identified measurement tools, additional research was conducted to assess their reliability, validity, and applicability. A total of 56 research contributions were screened to identify key metrics, supporting evidence, and limitations for each measure. A detailed overview of these findings is provided in **Appendix Table 4**, and a condensed summary of our main findings across the three categories is as follows:

- Reliability: Internal consistency was the most frequently reported metric, with scores ranging from moderate ( $\alpha = .62$ ) to excellent ( $\alpha = .97$ ) across measures. The SPEQ (Conroy et al., 2000), SPES (Gammage, Martin Ginis, et al., 2004), and BFNE (Carleton et al., 2006; Leary, 1983) demonstrated consistently high reliability. In contrast, the SPAS (Hart et al., 1989; Motl et al., 2000), showed greater variability, reflecting both conceptual limitations and contextual influences.
- Validity: Concerns about construct validity have been raised for various tools used to assess SPC. For example, the SPEQ has been critiqued for construct overlap between its impression motivation and impression construction subscales (Brunet et al., 2011). Similarly, the SPAS demonstrates variability in factor structure, particularly in cross-



cultural applications (Hagger et al., 2007).

- **Applicability:** Generalizability remains a concern, as many tools have been tested primarily on university student samples. For example, the SPES has been noted to require further validation in diverse populations, including elite athletes and recreational exercisers (Lamarche et al., 2013). Similarly, the BFNE has shown variability in its factor structure across different populations, suggesting a need for broader validation (Carleton et al., 2006). Qualitative approaches, such as phenomenological interviews, provide rich contextual insights but vary in methodology, making broader application challenging (Hill et al., 2017).

These findings highlight the fragmented state of SPC measurement tools and the lack of a comprehensive, standardized approach. There is a clear need for standardized, multi-dimensional instruments that can assess SPC in a more holistic manner. While current measures offer valuable insights, their limitations reveal gaps that must be addressed to advance both research and practical applications in sport psychology.

## Discussion

### Brief Summary

This paper set out to address key conceptual and methodological challenges surrounding SPC in sport and exercise, challenges that have long limited theoretical clarity and cumulative progress in the field. These efforts respond to calls in the literature for more structured approaches to defining, contextualizing, and assessing SPC (Dimmock et al., 2020; Martin Ginis et al., 2007). Through an exploratory examination of the literature, three central areas of focus emerged: First, we integrated existing definitions of SPC and proposed a new definition specifically tailored to sport and exercise contexts. This new conceptualization highlights the evaluative nature of these settings and the role of significant others such as coaches, teammates, or instructors. Second, we reviewed frequently used measurement tools and identified inconsistencies in their reliability, validity, and applicability - particularly regarding conceptual alignment with SPC. Third, we evaluated these tools in light of their empirical application, identifying methodological gaps and offering recommendations for future assessment development.

### Advancing the Knowledge Map

The knowledge map represents a novel contribution to the field, providing a structured, descriptive framework for understanding SPC. By organizing constructs such as self-focus traits, social trait anxiety, self-presentation needs, setting-related stressors, and significant other stressors, the map offers clarity to a previously fragmented body of work. Its structure serves a heuristic function, offering a basis for hypothesis generation without claiming confirmed relationships. Future research should examine and validate the map's assumptions, particularly the proposed connection between SPC and various forms of social state anxiety, such as competitive anxiety and social physique anxiety (Hart et al., 1989; Leary, 1992). While SPC may represent an antecedent or contributing factor in the development of these anxieties, further empirical investigation is needed to clarify the nature and direction

of these relationships. Large-scale studies could also investigate how traits, needs, and situational factors interact to shape SPC, with the goal of informing tailored interventions. For example, interventions designed using the 5S framework could target specific stressors - such as audience evaluation or performance expectations - while accounting for individual differences like trait anxiety or self-monitoring tendencies (Geukes et al., 2013a, 2013b; Renfrew et al., 2017).

### Refining Assessment Tools

The fragmentation of SPC measurement tools in sport and exercise highlights the need for more standardized, multi-dimensional instruments. While tools like the Self-Presentation in Exercise Questionnaire (SPEQ) and the Social Physique Anxiety Scale (SPAS) provide valuable insights, they predominantly focus on specific traits and lack the breadth to capture situational or response-based dimensions of SPC (Conroy et al., 2000; Hart et al., 1989).

Rather than adding to the already diverse array of measurement tools, future efforts should prioritize the consolidation and refinement of existing instruments. This process could include expert consultation to identify shared constructs across current measures and the development of a unified framework that reflects the multi-dimensional nature of SPC. As previously outlined, available instruments tend to focus on one of three domains: 1) sport- and exercise-specific concerns, 2) appearance-related concerns, and 3) concerns about social evaluation or negative judgment by others. To improve conceptual clarity and advance toward consensus, future measures should aim to integrate these three categories, or at least strike a meaningful balance between them. Doing so would help bridge currently fragmented approaches and support the development of more comprehensive and theoretically grounded tools.

By leveraging the structure of the knowledge map and existing instruments, researchers could work toward a common measurement architecture that aligns key traits, needs, situational stressors, and behavioural or emotional responses. Consolidation would not only reduce redundancy but also improve comparability across studies, thereby enabling more cohesive progress in the field. As a practical step, researchers and practitioners could collaborate on selection guides to help identify the most appropriate tools for specific contexts, whether in competitive sport or exercise-based environments. Such resources could streamline the selection process and ensure alignment with a more consolidated, consensus-driven framework.

### Limitations

This conceptual paper has several limitations. First, the literature search was conducted from database inception up to December 2022, which defines the upper limit of studies included in this review. Given the rapid development of research in this area, these findings will need to be revisited as more recent contributions emerge. The literature selection process was also conducted without additional reviewers, which introduces the potential for confirmation bias or selective critique. Involving multiple reviewers or incorporating diverse perspectives in subsequent reviews would help strengthen the robustness of study selection and interpretation. Second, the review followed a narrative, exploratory approach rather than a preregistered systematic protocol. Although the search strategy was comprehensive, the absence of formal quality control procedures introduces potential selection bias and limits reproducibility, meaning that the synthesis presented

here should be interpreted within this methodological context. Incorporating more rigorous quality checks in later reviews would improve the validity and reproducibility of their conclusions. Third, only studies published in English or German were included, which may have resulted in the exclusion of relevant research published in other languages. Fourth, the inclusion of both sport and exercise research represents a deliberate conceptual choice that aligns with current disciplinary perspectives viewing these domains as interrelated facets of physical activity behaviour. While the competitive, public nature of some sports differs from the more individualised and appearance- or health-oriented focus of many exercise settings, both domains share similar evaluative and self-presentation-related processes (Dimmock et al., 2020; Eklund et al., 2023). The present integration therefore provides a comprehensive starting point for theorising about self-presentation concerns across physical activity. Future work may distinguish more precisely between sport-specific and exercise-specific pathways as the body of research expands. Fifth, the connections proposed in the knowledge map are based on the available evidence but require further validation through empirical research. At this stage, the map remains a conceptual tool based on the available evidence and therefore requires further empirical validation.

Taken together, these limitations reflect the early-stage nature of this work. However, they also emphasize the value of the contribution: by organising a diffuse literature, proposing a refined definition, and offering a structured conceptual map, this paper provides a foundation on which more rigorous and domain-specific empirical research can build.

## Conclusion

This conceptual paper underscores the need for a clearer, more context-specific conceptualization of self-presentational concerns (SPC) in sport and exercise. To address current inconsistencies, we proposed a refined definition tailored to the evaluative nature of sport and exercise settings, along with a knowledge map that organizes theoretically and empirically suggested constructs potentially relevant to SPC in this context. Together, these contributions aim to provide a coherent foundation for future theoretical and empirical work. Rather than adding additional dimensions, we emphasize the need for empirical research that critically examines and progressively refines the proposed knowledge map. This includes testing the structure it suggests, such as the relationships between traits, situational stressors, and responses, with the goal of gradually evolving it from a conceptual, hypothesis-driven framework into an empirically supported model. In this way, the map can serve as a flexible but cumulative structure for future inquiry.

Beyond its theoretical value, a more robust understanding of SPC holds promise for developing more comprehensive and integrated assessment tools, which in turn can support the design of interventions tailored to the needs of athletes, exercisers, coaches, and applied practitioners. Given the potential role of SPC in phenomena such as performance anxiety and avoidance behaviour, closing these conceptual and methodological gaps could meaningfully advance both research and applied practice in sport and exercise psychology.

Finally, while this work is situated in the sport and exercise domain, the proposed conceptualization may offer transferable insights to adjacent contexts in which social

evaluation and impression management are equally important, such as public speaking, performing arts, education, or other settings where individuals are evaluated and where the impressions they convey carry meaningful consequences. As such, SPC may represent a broader psychological construct with relevance across a variety of socially evaluative environments.

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