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**Psychological safety in sport: A systematic review and concept analysis**

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### **Abstract**

There has been a rapid proliferation of empirical research on the relationship between sport participation and mental health. As a result of this movement, there has been an increased focus on the constructs that can predict or explain mental health outcomes in sport.

Psychological safety in sport is among the constructs surfaced in the movement. Despite this, there is a considerable lack of conceptual clarity regarding how to define psychological safety and how it can be fostered in sport. As such, the aim of this study was to provide conceptual clarity of the term psychological safety in the context of sport. To achieve this aim, we first systematically searched for all currently available studies that have discussed psychological safety in a sport context. Then, a concept analysis approach was applied wherein the definitions, attributes, antecedents, and consequences were thematically analysed across 67 studies. As a result of this synthesis, psychological safety in sport was conceptualised as a continuous, group level construct that is perceived (and reported) at an individual level. We also provide a descriptive model of psychological safety in sport that we hope lends clarity and debate to the field moving forward.

**Keywords:** athlete; definition development; mental health; psychological harm; wellbeing

### **Psychological safety in sport: A systematic review and concept analysis**

Mental health is an important outcome of sport involvement across elite (e.g., Reardon et al., 2019) and recreational sports (Vella & Swann, 2021). For example, elite sports have been inundated with mental health statements in the last three years that span governing bodies such as the International Olympic Committee (Reardon et al., 2019), and formal bodies in sports medicine (Chang et al., 2020; Gorczynski et al., 2019) and sport psychology (Henriksen et al., 2019; Moesch et al., 2019). There has also been an increasing number of mental health programs developed for youth sports (e.g., Vella et al., 2020) and calls for the development of mental health guidelines for recreational sports (Vella & Swann, 2021). Existing statements are broad in their applications, and incorporate recommendations for athletes (e.g., Schinke et al., 2018), sports psychologists (e.g., Henriksen et al., 2020), athlete support teams (e.g., Chang et al., 2020), secondary schools (e.g., Neal et al., 2015), universities and colleges (e.g., NCAA Sport Science Institute, 2017), and governing bodies (e.g., Reardon et al., 2019). The mental health movement in sport has, as a consequence, brought a sharp focus to the constructs that can predict or explain mental health outcomes in sport.

One construct that has been used within the context of mental health in sport is psychological safety (e.g., Henriksen et al., 2020). The primary usage of the term psychological safety has been derived from the work of Edmondson (1999) in the field of organisational psychology. Edmondson (1999) defined psychological safety as an interpersonal and team level construct. Specifically, team psychological safety is defined as a shared belief that the team is safe for interpersonal risk-taking (Edmondson, 1999). This conceptualisation has underpinned a large body of research within organisational contexts, including the antecedents and consequences of psychological safety in the workplace (Newman et al., 2017).

Despite a trend toward increased usage of the term psychological safety in a range of settings, a recent systematic and conceptual review of psychological safety in organisational contexts found that this body of work requires greater theoretical understanding in order to promote more robust empirical research (Newman et al., 2017). In turn, Turner and Harder (2018) explored the concept of psychological safety within simulation learning environments. Turner and Harder (2018) defined psychological safety as “a feeling or climate whereby the learner can feel valued and comfortable yet still speak up and take risks without fear of retribution, embarrassment, judgment or consequences either to themselves or others, thereby promoting learning and innovation” (p. 49). The subtle differences between this definition and that provided by Edmondson (1999) demonstrate that the application of the term psychological safety can vary across contexts (Turner & Harder, 2018). This discrepancy calls into question the applicability of previously defined antecedents, attributes, and consequences of psychological safety in the context of sport.

The concept of psychological safety has been prioritised within youth sport through the U.S. National Research Council and Institute of Medicine (NRCIM; 2002) who have articulated eight contextual setting features that can facilitate positive development in youth. Specifically, the first feature of such programs is physical and *psychological safety* (NRCIM, 2002). Although the need for programs to include physical and psychological safety has been advocated broadly in youth sports (e.g., Bean & Forneris, 2016; Bean et al., 2018a; Fransen et al., 2020), limited detail regarding what constitutes psychological safety within this context is provided in this document (NRCIM, 2002). While reference is made to notions of Edmondson’s (1999) conceptualisation of psychological safety, the authors of the report also refer to the detrimental effects of experiencing or witnessing violence, being subject to harassment or unkind behaviours by classmates, and prolonged stress when discussing psychological safety (NRCIM, 2002). Similarly, the International Society of Sport

Psychology (ISSP; Henriksen et al., 2020) have provided the following recommendation regarding Olympic and Paralympic athlete mental health on behalf of a number of sport psychology associations, national Olympic committees, and selected sports organisations:

Sport psychology practitioners should teach athletes mental/self-regulation skills to optimise resilience and their ability to cope with stressful, high pressure environments. However, this strategy should be supplemented by putting in place initiatives to (a) improve the *psychological safety* [italics added] of pre-, during-, and post-Games high performance environments, (b) reduce any unnecessary stress, (c) optimise recovery, (d) de-stigmatize mental health issues, and (e) increase help-seeking (p. 406).

Both the NCRIM and the ISSP usage of the term psychological safety appear to incorporate Edmondson's (1999) emphasis on an environment that cultivates risk-taking behaviour. However, the addition of references to harassment, violence and stress suggests that the current use of psychological safety in the sporting literature is a more complex concept that encompasses areas of risk not included in Edmondson's (1999) definition.

A review of the literature suggests that there are a number of problems with the concept of psychological safety in sport that may limit the impact of research and practice based on the construct. First, the construct lacks definition in the areas where it is prominently used in sport. For example, in both the multi-societal consensus statement above (Henriksen et al., 2020) and the body of youth sport research which advocate for psychological safety (NRCIM, 2002), the construct is not explicitly defined. As such, the term is used ambiguously within these key documents, and no indication is given as to exactly what is meant by the term. Second, where the term has been defined, there are conflicting definitions. The primary usage of the term has been generalised from the field of organisational psychology and the definition provided by Edmondson (1999). For example, in line with the

definition provided by Edmondson (1999), Fransen and colleagues (2020) defined psychological safety as “a belief that the team is safe for interpersonal risk-taking, such as asking for help, admitting one’s errors, or seeking feedback from others” (p. 2). In validating a measure of psychological safety in youth sports, Bean and colleagues (2018a) contrastingly defined the term as “an environment that allows youth to feel free from psychological harm; accepted, and respected” (p. 6). It is also unclear which definition, if any, is consistent with the usage of the term in those studies and documents which have not provided a definition. For example, the emerging usage of the term in sport (such as within mental health recommendations) alludes to a much more complex definition than those provided. As a result, psychological safety appears to be an immature concept within sport and a commensurate lack of conceptual clarity, despite acceptance and wide usage in both elite and recreational sport contexts.

More recently, and as a consequence of the above, attempts have been made to measure psychological safety in sport (Bean et al., 2018a; Fransen et al., 2020). However, conflicting definitions that underpin these measures makes it difficult for the field to move forward in a constructive way. To enable and support the field in moving forward with regards to studying and applying psychological safety in sport, conceptual clarity is urgently needed. One method to do this is through concept analysis. There are a number of different approaches to concept analyses including those proposed by Walker and Avante (2005), Chinn and Jacobs (1983), and Rodgers (1989), among others; despite some conceptual differences, all approaches seek to analyse, define, develop and distinguish concepts that are commonly used in a given field (Toftthagen, 2010). This refinement allows for further development of theory and theoretical models. The method of concept analysis seeks to provide a robust understanding of complex concepts by clearly delineating the concept from related concepts, developing a set of conditions that are required in order for something to be considered an example of that

concept (characteristics or attributes), defining circumstances that must be in place in order for this concept to occur (antecedents), and actions or issues that may be attributed to the concept occurrence (consequences). Developing a detailed understanding of each of these aspects provides a rich understanding of the concept in a given environment (Rodgers, 1989).

The aim of this study was to provide conceptual clarity of the term psychological safety in the context of sport. We aimed to accomplish this by exploring the ways in which the concept of psychological safety has been used in the context of sport, including its definition, antecedents, attributes, and consequences (Rodgers, 1989). Through this process we aimed to provide a coherent definition of psychological safety in sport that can underpin robust empirical work moving forward, and to provide a preliminary conceptualisation of the antecedents and consequences of the concept as they have been implied within the literature.

## **Methods**

### **Methodological Approach**

We followed Rodgers Evolutionary Method of concept analysis in this study (Rodgers, 2000). This inductive method encompasses the following steps: (a) identify and name the concept of interest (including surrogate terms); (b) identify the relevant setting or environment; (c) collect the data required to understand the attributes, antecedents, and consequences of the concept; (d) analyse the data relevant to the characteristics listed above; (e) identify an exemplar of the concept (if appropriate); and (f) identify hypotheses and implications for further development of the concept (Rodgers, 2000). We chose the Evolutionary Method due to the underlying acknowledgement that concepts are dynamic, and therefore may vary over time and within different environments (Rodgers, 2000). Note that due to the immature nature of the concept of psychological safety within our chosen environment (sport), we were unable to identify an exemplar of the concept. We expect that



an exemplar of psychological safety in sport will be developed through further research allowed by the clarification of this concept here.

### **Search Protocol**

The search process and reporting aligned with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines (PRISMA; Moher et al., 2009). In keeping with the approach described above, a systematic literature search was applied using five electronic databases, comprising a combination of sport (SPORTDiscus), psychology (PSYCInfo, PSYCArticles), and general scientific (Academic Search Complete, Medline) databases. The final search was conducted on 17 June 2020. The search string used in this review was: (psychological safety OR psychologically safe) AND (sport\* OR athlet\*). The first field was searched at the full-text level to gather all studies that have used the term “psychological safety”. The second field was searched at the title and abstract level to maximise the relevance of the results, while also limiting irrelevant results.

### **Eligibility Criteria**

In order to gather all literature relevant to the aims of the current review, inclusion and exclusion criteria were applied (Centre for Reviews and Dissemination, 2009; Siddaway et al., 2019). Inclusion criteria included: (a) be published in the English language; (b) have undergone peer-review (e.g., unpublished dissertations and book chapters were not included); and (c) use the term “psychological safety” or “psychologically safe” in the abstract, introduction, methods, results, or discussion. We chose to focus our efforts on published material in peer-reviewed outlets as publication offers a robust proxy for research quality and definitional use. Articles that only included the term in the reference list were excluded. Studies targeted at elite athletes, sub-elite (or recreational) athletes, or any other social agent (i.e., coaches, parents, administration) in sport were included. For the purpose of article selection, we operationalised “sport” as activities that include: physical exertion and/or a

physical skill; a structured or organised setting for training and/or competition; and, competition against others. This definition has been used in previous research and nationally sanctioned organisations (Australian Bureau of Statistics, 2008; Khan et al., 2012).

### **Screening Process**

Figure 1 provides an illustration of the screening process at each level. Several steps were taken to ensure a comprehensive screening process (Siddaway et al., 2019). Following the removal of duplicates, 146 articles were independently screened at the title and abstract level by two of the authors. The majority of studies excluded at this level were not related to sport, and any discrepancies were discussed among two authors (MS and JS) in an effort to avoid omission of relevant literature. Following this, the remaining 102 articles were independently screened by one author at the full text level. We deemed single-screening appropriate at this level as the author performing the screening was instructed to simply highlight search for the term “psychological safety” to assure that it appeared in a location outside of the reference list. Thus, all exclusions at this level were due to not using the term “psychological safety” in the abstract, introduction, methods, results, or discussion. As a result, 67 articles remained for extraction and analysis.

INSERT FIGURE 1 HERE

### **Data Extraction and Analysis**

In line with recommendations for concept analysis, data relating to definitions, attributes, antecedents, and consequences of psychological safety were identified and extracted using an inductive approach as described in Rodgers (2000). Once all relevant information was extracted for each study and inserted in an excel spreadsheet, three individual authors led the analysis of the four categories of results (i.e., definitions, attributes, antecedents, and consequences). Definitions from the included studies were extracted, with the most prominent definitions reported within the results. Data for the remaining three

categories were then analysed separately using a thematic analysis approach to identify themes. To begin thematic analysis, each single piece of data was coded line by line (Thomas & Harden, 2008). In this way, a complete coding process was undertaken, wherein all data that were relevant to the research question (in this case defining each of these categories) were coded (Braun & Clarke, 2013, 2019). These codes were then organised into themes (Braun & Clarke, 2013; Thomas & Harden, 2008). Although individual authors led specific aspects of the analysis, a collaborative approach was utilised whereby all authors engaged in peer debrief throughout the analytic process. Thus, each author served as critical friends by challenging each other's interpretation of the data and generation of codes and themes (Smith & McGannon, 2018).

### **Results**

Table 1 provides an overview of the themes and codes generated from the data regarding the antecedents, consequences, and attributes of psychological safety. A total of 67 articles mentioned the term “psychological safety” in the sport literature between 1991 – 2020. Among these articles, 20 (30%) provided a concrete definition for the term. We further elaborate on the uses of the concept, defining attributes, antecedents, and consequences of psychological safety in sport.

INSERT TABLE 1 HERE

#### **Definition/Concept Uses**

In 2002, NCRIM published a report outlining features of youth sport programs that fostered positive developmental settings (NCRIM, 2002). The first feature includes “physical and psychological safety.” Within the report, this criterion was defined as “safe and health promoting facilities; practice that increases safe peer group interaction and decreases unsafe or confrontations peer interaction” (p. 9). It was further refined to describe what physical and psychological safety are *not*: “Physical and health dangers; fear; feeling of insecurity, sexual

and physical harassment; and verbal abuse” (NCRIM, 2002, p. 9). In further describing psychological safety, the authors of the report refer to the detrimental effects of experiencing or witnessing violence, being subject to harassment or unkind behaviours by classmates, and prolonged stress (NCRIM, 2002). While psychological safety is not defined independently of physical safety in this report, the context appears to refer to quite a different concept than the way in which psychological safety has been used within the organisational psychology literature.

Drawing on by Edmondson (1999), Fransen et al. (2020) provided a definition for psychological safety in sport:

Psychological safety is defined as a belief that the team is safe for interpersonal risk-taking, such as asking for help, admitting one’s errors, or seeking feedback from others (Edmondson, 1999). Within psychologically safe environments, team members are genuinely interested in their teammates, have positive intentions to one another, and express mutual respect for each other’s competence even (and especially) when mistakes are made (Newman et al., 2017). On the contrary, when individuals feel psychologically unsafe in their team, they will be reluctant to demonstrate their vulnerabilities (even if it could benefit the team) as they believe it puts them at risk of appearing incompetent or weak to others, thereby potentially posing a threat to their self-image (Edmondson, 1999) (p. 2).

Finally, Bean et al. (2018a) defined the term as “An environment that allows youth to feel free from psychological harm; accepted, and respected” (p. 6). As such, the three primary definitions provided within the literature have some overlapping features, most notably the feature of safety in relation to peer interactions. The NCRIM (2002) also includes the absence of threats, fear and abuse, which is similar to the notion of ‘free from psychological harm’ provided by Bean et al. (2018a).

### **Defining Attributes**

Attributes are recurring themes in the literature that describe the essential aspects as a concept (Walker & Avant, 2005). Psychological safety was associated with physical safety when referring to the NRCIM criteria in a number of articles without further elaboration (Butterfield et al., 1991; Camire, 2014; Carpentier & Mageau, 2013; Erhardt et al., 2014; Henriksen et al., 2019; Johnston et al., 2013; Kavanagh et al., 2016; Kavanagh et al., 2017; Morgan et al., 2019; Perkins & Naam, 2007; Petitpas et al., 2017; Rovio et al., 2012; Schroeder, 2010; Teng & Wang, 2020). Within this category, six themes were generated, including: (a) structure of psychological safety; (b) promotion of risk-taking behaviour; (c) absence of psychological threat or harm; (d) positive interpersonal relationship; (e) a positive emotional state; and (f) equality, inclusiveness, and respect.

### ***Structure of Psychological Safety***

In a broad sense, psychological safety is considered an aspect of the organisational environment (Bean et al., 2018a; Bean et al., 2018b; Bean & Forneris, 2016; Bean et al., 2020; Brunelle, 2007; Camire et al., 2014; Duerden & Witt, 2010; Fauth et al., 2007; Fraser-Thomas et al., 2005; Fraser-Thomas et al., 2010; Hancock et al., 2013; Hancock et al., 2018; Johnston et al., 2013; Normand et al., 2017; MacDonald et al., 2009; Metsapelto & Pulkkinen, 2012; Shannon & Werner, 2008; Spink et al., 2013; Strachan et al., 2009; Tint et al., 2017; Toomey & Russell, 2013). It was also recognised, however, that it may be beneficial to measure psychological safety at an individual level as players may have differing perceptions of psychological safety in their environment (Darcy et al., 2017; Toomey & Russell, 2013). Authors also appeared to agree that psychological safety exists along a continuum rather than as a discrete/binary concept (Bowers et al., 2014; Purcell et al., 2019) and argued that it is a complex phenomenon made up of a number of differing conditions (Bowers et al., 2014).

***Promotes Risk-Taking Behaviour***

In a psychologically safe environment, individuals feel free to take risks without fear of retribution (Silva et al., 2014; Strachan et al., 2011; VanderVeken et al., 2020). Risks may include speaking out against poor behaviour (Middlemas & Harwood, 2018; Spink et al., 2013; White & Rezania, 2019), challenging the coach (Middlemas & Harwood, 2018), asking questions, reporting an error, seeking feedback, or proposing a new idea (Smittick et al., 2019). Participants also experience a perception that their concerns and comments are listened to (White & Rezania, 2019).

***Absence of Threat or Harm***

Psychological safety is also characterised by the absence of threat or harm (Goldberg & Chandler, 1995; Henriksen et al., 2020; Webster et al., 2017). Harm may be psychological, such as embarrassment, rejection, or punishment, or it may include the threat of physical harm (Webster et al., 2017). Of particular note is the absence of antisocial behaviour such as bullying by others (e.g., teammates, coaches; Bean et al., 2018a; Kaye & Hoar, 2015). Freedom from combative relationships (Bean et al., 2018a; Graham & Dixon, 2017) and the active role of coaches in mediating conflict behaviour are also pertinent. The absence of trauma, violence, or fear of violence are also hallmarks of psychological safety (Brady, 2005).

***Positive Interpersonal Relationships***

Positive social interactions within organisations were consistently articulated as a characteristic of psychological safety in sport (Bean & Forneris, 2016, Bean et al., 2018a; Brady, 2005; Moynihan & McMahon, 2014; Strachan et al., 2009). In particular, the presence of positive peer to peer interaction appears to be central within a psychologically safe environment (Bean et al., 2018a; Brady, 2005; Moynihan & McMahon, 2014; Strachan et al., 2009). Coaches may help foster this by ensuring that youth athletes use respectful language,

avoid bullying behaviours, and minimise interpersonal conflict (Bean et al., 2018a). These positive interactions may extend to an environment of enhanced peer support (Middlemas & Harwood, 2018) or even a sense of family or camaraderie among the team (Bean et al., 2020; Newton et al., 2007; Strachan et al., 2011). In addition to peer support, supportive coaches and management may contribute to perceptions of psychological safety among the team (Bean et al., 2018a; Lee et al., 2019; Spink et al., 2013), and this may be through the development of rapport with the athletes (Didymus & Backhouse, 2020; Kamm, 2008; Newton et al., 2007). Finally, organisational support from coaches on both a professional and personal level may help instil a sense of psychological safety within the organisation (Graham & Dixon, 2017).

### ***Positive Emotional State***

Both the achievement and the active promotion of positive emotional states while partaking in sport are important for psychological safety. The absence of anxiety (Brady, 2005; Henriksen et al., 2009; Rotheram et al., 2016), fear (Rasmussen & Ostergaard, 2016), and excessive stress (Harwood, 2009) are key components of a psychologically safe environment in sport. More generally, psychological safety may be characterised by an emotional sense of safety and security (Darcy et al., 2017; Didymus & Backhouse, 2020; Fraser-Thomas et al., 2005; Lee et al., 2019; Newton et al., 2007; Strachan et al., 2011). The positive emotional status of participants may be encouraged by a focus on the emotional and psychological well-being (Bean et al., 2018b; Blynova et al., 2020) of athletes. Behaviours that may encourage a positive emotional climate include refraining from sarcasm, encouraging the use of manners, and refraining from foul language (Bean et al., 2018a). Extending this focus beyond simply the achievement of a positive emotional climate, some authors referred to the protection of positive emotional states. Psychologically safe environments are those which offer a state of psychological protection (Blynova et al., 2020)

and in which the participants learn to manage their emotions (Bowers et al., 2014). Bean and Forneris (2016) describe psychologically safe environments as those that prioritise psychological and physical safety over performance.

### ***Equality, Inclusiveness and Respect***

Psychologically safe environments exude a sense of fairness to those involved in them (Brown & Arnold, 2019). This may be achieved by establishing and fostering a climate of trust within the team and between the coaches and organisation (Didymus & Backhouse, 2020; Fransen et al., 2020; Graham & Dixon, 2017; Józefowicz, 2020; Kamm, 2008; Warner, 2019). The trust is fostered through mutually respectful interactions which are inclusive and supportive of all members (Aicher, 2012; Bean et al., 2020; Bean et al., 2018b; Bean & Forneris, 2016), allowing participants to be themselves both in and out of the physical sport environment (Webster et al., 2017). Within this inclusive environment, participants may perceive a non-judgemental acceptance of who they are and of their choices (Bean et al., 2020; Didymus & Backhouse, 2020; Middlemas & Harwood, 2018; Turk et al., 2019). The inclusiveness and respect may be reflected in the transparency of the leadership decisions (Brown & Arnold, 2019; Warner, 2019).

### **Antecedents**

Antecedents are the events or phenomena that are found to precede psychological safety (Walker & Avant, 2005). Nine unique themes of antecedents were identified from 61 unique codes, including: (1) settings for psychological safety; (2) appropriate program design; (3) organisational culture, policies and roles; (4) coaching behaviours and relationships; (5) leadership behaviours; (6) parent behaviour; (7) culture and values; (8) social interactions; and (9) absence of negative behaviours.

### ***Settings for Psychological Safety***



From the included studies, a number of settings were identified in which psychological safety may occur. Broadly, sport is recognised as a setting for psychological safety, with elite (e.g., Henriksen et al., 2020) and team (Silva et al., 2014) sport settings also highlighted. In addition, youth sport settings that were characterised by lower child to staff ratio (e.g., Fraser-Thomas et al., 2010), were smaller sporting clubs (e.g., Fraser-Thomas et al., 2010), or occurred in smaller cities (e.g., Turnnidge et al., 2014) were suggested to be more likely to facilitate psychological safety.

### ***Appropriate Program Design***

The design of sport programs was highlighted as a potential antecedent of psychological safety. The included studies suggested that programs should be designed with the following characteristics in mind: structured and predictable (e.g., Vanderveken, 2021); designed intentionally and underpinned by theory (e.g., Warner et al., 2019); clear rules and expectations for all involved in the program (e.g., Bean et al., 2018b); delivered in the appropriate context (e.g., Bean et al., 2018b); flow and smooth transitions between activities within the program (e.g., Bean et al., 2018b); and programs designed with an appropriate philosophy and ideology (e.g., Strachan et al., 2009).

### ***Organisational Culture, Policies, and Roles***

The organisation was identified to play an important role for the psychological safety of participants (particularly youth athletes). For an organisation to facilitate psychological safety, it was suggested that: there is clarity of roles within the organisation (e.g., Spink et al., 2013); administrators and adults involved in the organisation act with benevolent intentions (e.g., Goldberg et al., 1995); due diligence is performed by all stakeholders to ensure a positive environment (e.g., Normand et al., 2017); there is a positive organisational culture (e.g., Schroeder et al., 2010); policies and procedures are in place that promote diversity (e.g.,

Aicher, 2012); youth view the organisation positively (Fauth et al., 2007); and management is supportive, particularly of coaches (e.g., Graham et al., 2017).

### ***Coaching Behaviours and Relationships***

The coach was identified as having potential to act both as a facilitator of, and barrier to, psychological safety for their athletes. To act as an antecedent to psychological safety, it was identified that coaches should: be accessible and communicative with athletes (e.g., Brown & Arnold, 2019); have positive relationships with their athletes (e.g., Purcell et al., 2019); establish an appropriate team culture (e.g., Webster et al., 2017); act as a positive role model (e.g., Bean et al., 2020); refrain from adopting negative or maladaptive behaviours such as punishments (e.g., Bean et al., 2020); be able to identify, and where necessary, perform/promote emotional healing for their athletes (e.g., Teng et al., 2020), for example after performance failures. It was also highlighted within the literature that athletes having a sense of trust in their coach (e.g., Józefowicz, 2020) may play a role in their sense of psychological safety.

### ***Leadership Behaviours***

Within the reviewed literature it was highlighted that a number of leadership behaviours acted as antecedents to psychological safety. While such behaviours apply to coaches (e.g., White et al., 2019), these behaviours may also be relevant to other leadership roles, such as captains and informal team leaders (e.g., Fransen et al., 2020), or program leaders (e.g., Bean et al., 2018a). Leadership behaviours which fostered psychological safety were identified as: acting as a positive role model (e.g., Henriksen et al., 2015); fair and ethical leadership (e.g., White et al., 2019); inclusive leadership style (e.g., Aicher, 2012); high emotional-healing competency (e.g., Teng et al., 2020); supporting peer-to-peer connections (e.g., Warner et al., 2019); identity leadership (i.e., a focus on the *we*, rather than the *me*; Fraser et al., 2020); and providing change-orientated feedback (e.g., Carpentier et al.,

2013). Furthermore, in the case of adult leaders, positive relationships between youth and adult leaders were identified as an antecedent of psychological safety (e.g., Fauth et al., 2007).

### ***Parent Behaviours***

Parents were identified as both a potential facilitator, and barrier, for psychological safety of athletes. To foster psychological safety, it was suggested that parents should be supportive (e.g., Fraser-Thomas et al., 2010) and not apply pressure to their child-athlete (e.g., Brady, 2005).

### ***Culture and Values***

Within sporting settings, a number of cultural norms and shared values were suggested as antecedents to psychological safety. These included: addressing conflicts effectively when they arise (e.g., Bean et al., 2020); encouraging athletes to challenge the status quo (e.g., Smittick et al., 2019); creating a caring context (e.g., Newton et al., 2007); developing a common purpose and identity (e.g., Spaaij et al., 2014); providing an environment which is accepting of different cultures (e.g., Brady et al., 2005); promoting equal opportunity and fair competition (e.g., Kaye et al., 2015); having optional participation (e.g., Bean et al., 2020); enforcing rules and expectations (e.g., Bean et al., 2020); emphasising fun and development (e.g., Normand et al., 2017); and facilitating trust within the environment (e.g., Józefowicz, 2020).

### ***Social Interaction***

The role of social interaction among athletes was highlighted as a potential antecedent of psychological safety. Specifically, to facilitate psychological safety, it was suggested that these social interactions be characterised by: a sense of satisfaction with interpersonal relations (e.g., Blynova et al., 2020); positive peer-to-peer interactions (e.g., Middlemas et al., 2018); a sense of belonging and family (e.g., Strachan et al., 2011); constructive

relationships between peers (e.g., Morgan et al., 2019); group harmony (e.g., Blynova et al., 2020); and teamwork (e.g., Spaaij et al., 2014).

### ***Absence of Negative Behaviours***

To effectively foster psychological safety, it was also suggested that sport settings be free of negative behaviours. Such behaviours included: violating relationships through behaviours such as insults, threats, and manipulation (e.g., Blynova et al., 2020); degrading treatment (e.g., Kaye et al., 2015); emotional abuse (e.g., Kavanagh et al., 2017); and malevolence (e.g., Kaye et al., 2015). In the case of elite or high-profile athletes, it was suggested that social media abuse could threaten an athlete's psychological safety (e.g., Kavanagh et al., 2016). Accordingly, it is important that athletes are encouraged to speak out against negative behaviours (e.g., White et al., 2020), and that those that engage in behaviours that threaten the psychological safety of others face serious reprimand, such as probation or suspension (e.g., Strachan et al., 2011).

### **Consequences**

The consequences summarised here represent outcomes that can result from psychological safety in sport (Walker & Avant, 2005). Across the 67 studies, consequences discussed in the context of psychological safety yielded 61 unique codes. These codes were grouped into seven distinct themes. Themes were then further dichotomised into individual outcomes (e.g., personal development, mental health, motivation for continued sport participation) or group outcomes (e.g., social connections, team effectiveness and performance, learning and transfer or knowledge, and social climate).

### ***Individual Outcomes***

With respect to individual outcomes, the included literature considered psychological safety as a precursor to an athlete's (a) personal development; (b) mental health; and (c) motivation to continue participating in sport. Personal development was often discussed in

the context of positive youth development. As per the NRCIM framework of positive youth development, several articles listed psychological safety as a primary tenet for developmental outcomes among youth (e.g., Bean & Forneris, 2016; Bean et al., 2018a, b; Camiré et al., 2014; Fraser-Thomas et al., 2005; Fraser-Thomas et al., 2010). Further, some articles were more specific and discussed the impact of psychological safety on confidence (Strachan et al., 2011; Warner et al., 2019), self-worth (Strachan et al., 2011), resilience (Moynihan et al., 2014), creativity (Brady et al., 2005), and realising one's potential (Kamm, 2008).

With regard to mental health, psychological safety was suggested to reduce psychological distress (VanderVeken et al., 2020), anxiety (Henriksen et al., 2015), stress (Harwood & Knight, 2009), and athlete burnout (Fransen et al., 2020), and to enhance an athlete's capacity to thrive (Henriksen et al., 2020). Finally, findings from this review suggest that psychological safety can lead to motivation to continue participating in sport among athletes. Specifically, perceived psychological safety may result in intrinsic motivation for participation and success in sport (Blynova et al., 2020), and continuous enjoyment and engagement throughout the experience (VanderVeken et al., 2020).

### ***Group Outcomes***

Group outcomes that may result from a psychologically safety sport environment include (a) social connections; (b) team effectiveness and performance; (c) learning and transfer or knowledge; and (d) social climate. Specific to social connections, a psychologically safe sport environment is suggested to improve connections (Smittick et al., 2019; Warner et al., 2019), communication (Duerden et al., 2010), and perceived support among team members and other social agents in the group (e.g., team coach; Graham et al., 2017). In a similar vein, psychological safety may also lead to heightened perceptions of social identity among members (i.e., team membership; Fransen et al., 2020; Morgan et al., 2019). Further, several studies discussed psychological safety as a predictor to performance-

related outcomes. Indeed, specific outcomes discussed in the literature include increased team effectiveness (e.g., Webster et al., 2017), team performance (e.g., Lee et al., 2019), team cohesion (e.g., Smittick et al., 2019), teamwork (Fransen et al., 2020), and team commitment (Spink et al., 2013).

Authors also spoke to the increased opportunities for learning and effective transfer of knowledge in psychologically safe sport environments. For example, psychological safety is suggested to optimise team learning (e.g., Webster et al., 2017; Smittick et al., 2019), knowledge flow from coaches (Erhardt et al. 2014), mentorship from trusted adults (Brady, 2005), and reciprocal participation in feedback (Middlemas & Harwood, 2018). Lastly, psychological safety is proposed to have an impact on the social climate of the sport team/club. More specifically, a psychologically safe team/club leads to perceptions of comfort among members in the group (e.g., free from victimisation; Toomey & Russell, 2013), a general lack of intimidation and fear among members (e.g., Fraser-Thomas et al., 2005; Moynihan & McMahon, 2014), and freedom of emotional expression, risk taking, and movement (e.g., Brady, 2005).

### **Discussion**

The aim of this study was to provide conceptual clarity of the term psychological safety in the context of sport, including its defining attributes, antecedents, and consequences. Through a systematic review and analysis of 67 studies, we synthesised the key features of psychological safety in sport – as the term has been used to this point – as a continuous, group level construct that is perceived (and reported) at an individual level. Psychological safety has been reported as being constituted by the promotion of risk taking, an absence of threat or harm, positive interpersonal relationships, positive emotional states, and inclusivity, equality, and respect. Its antecedents have been synthesised as belonging to features of program design, organisational features, coach behaviours, peer behaviours, parental

behaviours, and cultural norms. The consequences of psychological safety in sport are synthesised as including individual and group level outcomes. At an individual level, positive developmental outcomes, mental health and wellbeing, and motivation to continue in sport are the consequences of psychological safety. At a group level, positive social connections, team effectiveness, performance and learning, and a positive social climate have been articulated as consequences of psychological safety.

### **Defining Psychological Safety**

A key outcome of this review was to note the distinct lack of definitional or conceptual clarity regarding psychological safety in the literature. First, in the vast majority of studies (70%) where psychological safety was used, no definition was offered at all. Second, when a definition or framework was provided, these were applied inconsistently. For example, five defining attributes of psychological safety were identified from the literature, each of which contained multiple features. This range of attributes suggests that the two major conceptual uses of the term – based on Edmondson (1999) and NCRIM (2002) – are broad and unclear. Failing to delineate conceptual boundaries risks both the meaningfulness of the construct, as well as incorporating attributes that are already part of an existing construct with its own established literature based (Spiker & Hammer, 2019; Wacker, 2004). Third, current explanations of psychological safety appear to implicate both the causes and process of the construct. For example, from the current study, it is clear that positive interpersonal processes have been articulated as an attribute, antecedent, and outcome of psychological safety. This circularity is problematic, as concepts should be defined independent of their causes and outcomes (Jackson, 2013). In sum, current definitions of psychological safety have not facilitated consistent conceptualisation and operationalisation across studies, and there appears the need for a more specific and precise definition of psychological safety in sport.

Definitions should largely reflect and conform to expert usage (Bunge, 2009). The use of the term psychological safety in sport appears to vary (at least in majority of the literature reviewed in this study) from the term as defined by Edmondson (1999) and Fransen et al. (2020). Indeed, the success of a definition ultimately depends on how likely those within a given field are to accept it and use it (Laas, 2017; Schiappa, 2003). Moreover, a clear definition of a construct forms the foundation of the construct validation process and basis for measurement development (Messick, 1995). The potential misalignment between definition and measurement within a context seems particularly relevant to the construct of psychological safety in sport. Specifically, Fransen et al. (2020) noted concerns in the validity and reliability of data derived from a self-report measure of psychological safety that was originally developed in organisational settings (Edmondson, 1999) and adapted to sport. As the authors suggest, a critical evaluation (and, therein, a potential revision) of the conceptualisation and measurement of this construct within sport is needed to advance this area of research. Thus, if the usage of the term appears inconsistent with the most prominent (and well-formed) definition, it may be beneficial to modify the definition. Such refinement of a construct can be a desirable and potentially necessary outcome of knowledge generation, where elucidating a construct (i.e., sharpening its meaning) facilitates continued knowledge production (Bunge, 2009). As such, there is cause to offer a refined definition that is both specific to sport, and reflects how the term psychological safety is used within the broader literature.

In light of the definitional critiques above, we consider a “good” definition as “a concise, clear verbal expression of a unique concept that can be used for strict empirical testing” (Wacker, 2004, p. 631). As such, we propose a new working definition of psychological safety in sport that is: specific to sport; consistent with expert usage as reviewed in this study; avoids reference to its causes or outcomes; and can be operationalised



for the purposes of measurement. Specifically, psychological safety in sport is *the perception that one is protected from, or unlikely to be at risk of, psychological harm in sport.*

There are six components of this working definition that require further expansion. First, psychological safety in sport is an environmental-level variable. This is a small but deliberate demarcation from the definition provided by Fransen et al. (2020) who have defined the construct as a team-level variable. We made this change because (a) not all sports are participated in within teams; (b) the antecedents of the construct include program design, organisational influences, and cultural norms; and, (c) the construct of psychological safety may be as applicable to officials, coaches, or others that operate in the sport environment. It is important here to differentiate the construct from other environmental-level variables such as a Facilitative Environment (Fletcher & Sarkar, 2016), or an Athlete Centred Environment (Kerr et al., 2017). While such constructs may precede psychological safety - causally or by correlation - the proposed definition is sufficiently narrow to differentiate it from other environmental constructs prevalent in the sporting literature. For example, even where psychological safety may be a component of (for example) an Athlete Centred Environment, the constructs are not interchangeable. In this way, the working definition provides some clarity on the types of environmental level variables that may be explored as antecedents or consequences of the construct.

Second, in keeping with current definitions and measurement approaches, we hypothesise that the construct is perceived at an individual level. It should be noted that despite this conceptualisation of an individual's perception of the environment, researchers in future could still examine the variable at the team level—that is, identifying the extent to which there is a *shared* perception of psychological safety throughout a team—such as through the use of multilevel modeling analyses. Third, the term 'perception' is included deliberately to emphasise that although organisations might intend to promote psychological

safety, the positive individual and team outcomes that emerge in these organisations ultimately depend on individuals' subjective judgments of the environment. Fourth, we hypothesise that the construct is continuous (rather than discrete) whereby one perceives *the extent to which* the environment is free from psychological harms. Fifth, although the construct is primarily aimed at athletes, perceptions of psychological safety may be applicable for any individual within a sports organisation. For example, do coaches, parents, officials, and support staff feel psychologically safe in their role? Finally, while the specific psychological harms are not defined here, they will need to be operationalised in order to facilitate measurement of the construct. Based on the literature reviewed here, we suggest that psychological harm includes fear, threat, and anxiety. To ensure that this conceptual understanding of psychological safety in sport is robust, it is important to consider its relation to existing theoretical perspectives. In the below section we offer a potential theoretical explanation of the modified construct based on the literature reviewed here.

### **Theoretical Implications**

Our review and synthesis of the antecedents of psychological safety in sport included coach-, peer-, and parental behaviours, organisational influences such as policies, program design features, and cultural norms. While we found no theoretical basis had been put forward for such antecedents, the themes generated fall in line with a socioecological perspective. The Socio-Ecological Model of Health Promotion (Sallis & Owen, 2002) describes the multiple levels of influence which impact upon one's health and health behaviours. The socioecological approach has already been used to conceptualise the antecedents of psychosocial outcomes of youth sport participation (Eime et al., 2013a, 2013b). Furthermore, the socioecological model has also been used to conceptualise the health promotion process within sporting clubs (Kokko, 2014). The literature on antecedents of psychological safety in sports appears consistent with this larger body of work and may be

a fruitful way of modelling the various influences that may impact on psychological safety in sport. While this model does not help to make predictions about specific constructs that may be causally related to psychological safety in sports, it provides a description and hypothesis about the various types of constructs which may have a causal influence, and the way that they may interact together to protect participants from, and minimise the risk of, psychological harm (Sallis & Owen, 2002).

We synthesised the consequences of psychological safety in sport into two higher order themes pertaining to individual-level and group-level outcomes. At an individual level the consequences of psychological safety included lower-level themes of personal developmental outcomes, mental health and wellbeing, and motivation to continue in sport. At a group level, the lower-level themes included positive social connections, team effectiveness and performance, learning at the team level, and social climate. These outcomes across all levels are broadly consistent with the frameworks of positive youth development in sport and coaching effectiveness that model athlete outcomes as belonging to one of four or five key groups being: competence, confidence, connection, and character/caring (Bruner et al., 2021). Given the potential that psychological safety may be a key component of both sporting programs aimed at promoting positive youth development and of coaching effectiveness, it is not surprising that the outcomes used across the field are similar to those that have been conceptualised previously. Borrowing from this literature may be beneficial in helping to conceptualise the outcomes of psychological safety in sport. Competence could include outcomes such as individual and team performance and learning. Confidence could include outcomes such as self-efficacy, and self-worth. Connection could include outcomes such as positive social connections, coach-athlete relationships and social climate. In line with the above, we offer the following descriptive model (Figure 2).

INSERT FIGURE 2 HERE

### **Limitations and Future Directions**

There are several limitations to the current review. First, the review is limited by a nascent state of research on psychological safety in sport. The implication of this is that the term has not yet had the benefit of time and/or substance in terms of its usage within the field and as such, the antecedents, conceptual uses, and consequences may be underdeveloped. Nonetheless, this may also be an opportune time to provide greater conceptual and definitional clarity to the term as we have endeavoured to do here. Second, it could be argued that the nascent nature of the field also means that re-definition may be premature, especially given the large body of work undertaken on psychological safety in alternate fields such as organisational psychology. However, even at this early stage, the usage of the term psychological safety in sport—in formal research (e.g., Fransen et al., 2020) as well as consensus statements (e.g., Reardon et al., 2019; Henriksen et al., 2019; 2020)—has already differentiated from the definition provided by Edmondson (1999), thus suggesting a need for re-definition. Finally, the focus of this review was conceptual analysis; however, very few studies actually defined or conceptualised the term psychological safety. This precludes a more robust handling of the concept than is provided here.

There is now a need to supplement the proposed definition with a body of work that includes the validation of a measure of psychological safety, quantitative assessment of antecedents and consequences, as well theoretical development. As an example of theoretical development, Delphi studies with both academic experts and other key stakeholders such as sporting organisations, coaches, and athletes could provide some empirical justification or evidence to support the proposed definition. Based on such work, empirical validation of a measure of psychological safety is an important initial step to support a line of enquiry related to the concept. A robust measure of psychological safety should also be used to provide evidence of discriminant and convergent validity. As a result of such empirical work,

it is entirely possible and appropriate that the definition is updated and amended based on evidence. We encourage researchers to engage in a range of robust methodologies to test, refine, and further elucidate the construct of psychological safety in sport. Ultimately, the goal of such research may be in its application whereby psychological safety can be provided in an evidence-based manner to all those who are involved in sport. We strongly urge researchers to pursue this goal and clarify the range of evidence-based strategies that are effective in providing or increasing psychological safety within sport. Some of the key areas for initial exploration include coaching behaviours, parental behaviours, spectator behaviours, motivational climate, athlete pro- and anti-social behaviours, and policies on mental health or athlete protection.

### **Conclusion**

While the use of the term psychological safety in sport-related literature is increasing – including among impactful documents such as position statements (Henriksen et al., 2020) – there appears to be little in the way of conceptual clarity. Indeed, the usage of the term appears to diverge from accepted definitions in other fields. As a consequence, we endeavoured to provide a working definition which is open to challenge and improvement. We therefore define psychological safety as the perception that one is protected from, or unlikely to be at risk of, psychological harm (including fear, threat, and insecurity) in sport. We have also provided a descriptive model that graphically represents the body of literature that has been reviewed here. The model does not make any hypotheses but is a simple representation of the antecedents and consequences of psychological safety in sport and informed by existing theoretical and conceptual work in the field. We hope that the working definition and descriptive model put forward here can bring clarity and debate to the field moving forward so that all those who participate in sport may be subject to psychology safety, however so defined.

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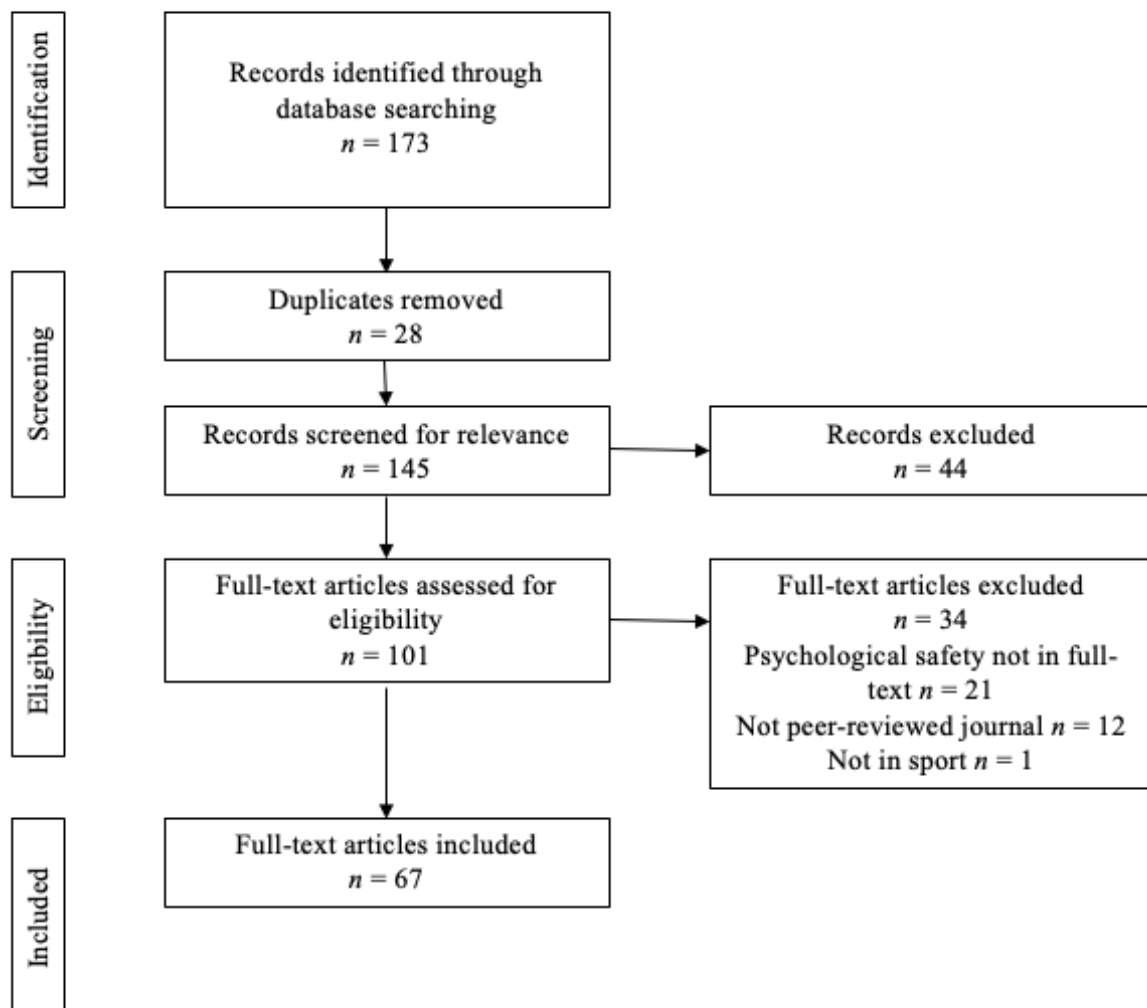
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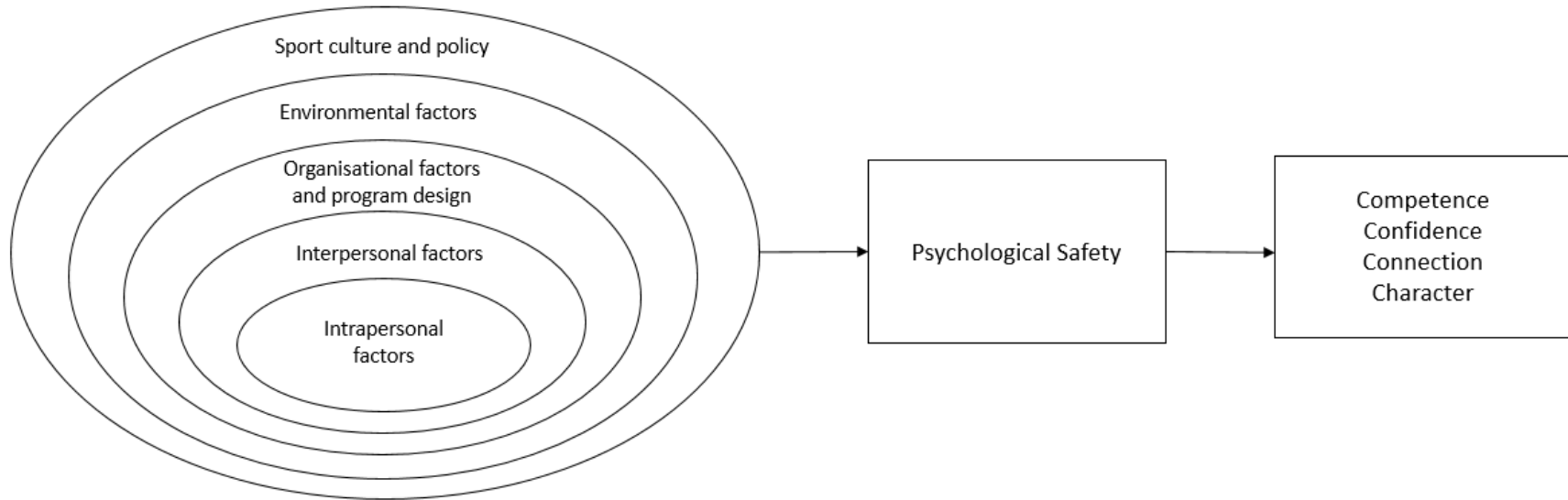
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**Figure 1.** Flow Diagram of Database Search and Record Screening



**Figure 2.** A Descriptive Model Conceptualising Psychological Safety in Sport



*Note.* This figure provides a conceptualisation of psychological safety in sport based on the synthesis conducted. Specifically, this conceptualisation draws on the Socio-Ecological Model of Health Promotion (Sallis & Owen, 2002) to describe the multiple levels of influence which may impact psychological safety. Further, the potential outcomes of psychological safety are provided, which are broadly consistent with models of positive youth development in sport (Bruner et al., 2021).

**Table 1***Summary of Results from Thematic Analysis*

Categories	Themes	Example Code
Defining Attributes	Structure of psychological safety	Psychological safety exists along a continuum
	Promotion of risk-taking behaviour	Individuals feel free to take risks without fear of retribution
	Absence of psychological threat or harm	Absence of antisocial behaviour (e.g., bullying)
	Positive interpersonal relationship	Presence of positive peer to peer interaction
	Positive emotional state	Absence of stress and anxiety
	Sense of social justice	Perception of fairness for everyone within the group
Antecedents	Settings for psychological safety	Lower staff to child ratio
	Appropriate program design	Designed intentionally and underpinned by theory
	Organisational culture, policies, and rules	Clarity of roles within the organisation
	Coaching behaviours and relationships	Coaches should be accessible and communicative
	Leadership behaviours	Acting as a positive role model
	Parent behaviours	Supportive behaviours from parents
	Culture and values	Encouraging athletes to challenge the status quo
	Social Interaction	A sense of belonging within the group
Consequences	Absence of negative behaviours	Avoid violating relationships through insults, threats, and manipulation
	Personal development	Increased personal competencies
	Mental health	Free from psychological distress
	Motivation for continued participation	Facilitative for enjoyment and motivation towards sport
	Social connections	Improved connection with the team coach
	Team effectiveness and performance	Increased team cohesion
	Learning and transfer of knowledge	Mentorship from trusted adults
Social climate	Free from intimidation and fear	