

1 **Abstract**

2 **Aims:** The concept of psychological safety has received growing interest within a sport
3 context in recent years. Despite a small but growing body of literature, there is still a lack of
4 conceptual clarity and thus research is needed to gain a better understanding of how
5 psychological safety manifests in sport. Existing literature suggests psychological safety may
6 allow for positive outcomes in various sport settings. As this may be of interest to many
7 coaches and sporting organizations, a deeper evidence base will prove beneficial for further
8 support to this claim. The aim of the current study was to garner conceptual clarity by
9 gathering coach and athlete perceptions of psychological safety in high-performance pathway
10 sport environments.

11 **Methods:** Qualitative findings of six focus groups with coaches (two focus groups) and
12 athletes (four focus groups) were comprised of four sports (Association Football, Boxing,
13 Field Hockey, and Swimming). A total of 25 Participants included 18 athletes ($M_{\text{age}} = 19.6$
14 years; $M_{\text{experience}} = 10.6$ years), and 7 coaches ($M_{\text{age}} = 45$ years; $M_{\text{experience}} = 19.6$ years) who
15 discussed psychological safety within their high-performance pathway sport environment.
16 Focus groups lasted from 36-78 minutes ($M_{\text{length}} = 56$ minutes). Qualitative content analysis
17 was utilized to categorize themes identified from the focus groups.

18 **Findings:** Findings offer a conceptualization of the defining attributes (e.g., freedom to speak
19 freely and raise issues), antecedents (e.g., positional competition, selection, and deselection),
20 and outcomes (e.g., positive climate and enjoyment of sport) of psychological safety in sport
21 settings. One of the key takeaways within the findings suggests that psychological safety in a
22 sport context may manifest in a dual process, namely on-field (e.g., the freedom to take risks)
23 and off-field (e.g., the freedom to speak freely and raise issues).

24 **Keywords:** *sport coaching; athlete development; wellbeing; sport environments.*

25

1 **Introduction**

2 The concept of psychological safety in sport has grown in both research and practice
3 in recent years. The early underpinnings of psychological safety originated from an
4 organisational context and remain fully embedded within organisational literature and
5 practice (Edmondson, 2018). The construct however has gained greater attention within the
6 context of sport. Although a growing volume of literature has sought to understand
7 psychological safety in a sport context, conceptual clarity on the construct in sport has yet to
8 be achieved (Vella et al., 2022).

9 **Definition and Nature of Psychological Safety**

10 Edmondson (1999) depicts psychological safety as the belief that one will not be
11 punished or humiliated for speaking up with ideas, questions, concerns, or mistakes, and that
12 the environment is safe for interpersonal risk taking. In the human development literature,
13 psychological safety is referred to as “the degree to which individuals feel comfortable taking
14 positive interpersonal risks such as trying something new” (Wanless, 2016, p. 6). It is
15 recognised that team environments which provide psychological safety have contributed to
16 improved personal engagement and interpersonal trust, stronger relationships, mutual respect,
17 positive intentions towards teammates, and reframing how groups view failure and learning
18 (Edmondson, 1999; Edmondson et al., 2004; Kahn, 1990; Newman et al., 2017; Schein,
19 1993). Comparably, if one feels psychologically unsafe, they may experience a hesitancy to
20 display their vulnerabilities, fearing the risk of appearing incompetent or inept, ultimately
21 jeopardising their self-image (Edmondson, 1999). Thus, it is not surprising that psychological
22 safety would be important for positive athlete and coach development.

23 Although psychological safety has gathered a reasonable understanding in the
24 organisational context, the sport domain has yet to gain full conceptual clarity on the
25 construct.

1 **Research on Psychological Safety in Sport**

2 A growing section of literature has advanced with a specific focus on how
3 psychological safety manifests in the sport domain (see Kinoshita & Sato, 2023; Rice et al.,
4 2022; Taylor, Collins, et al., 2022; Vella et al., 2022). Such studies have identified how
5 psychological safety relates to the coach-athlete relationship (Jowett et al., 2022), leadership
6 behaviours of the coach (Smittick et al., 2019), group cohesion (Smittick et al., 2019),
7 identity leadership (Fransen et al., 2020), communication-cohesion relationships (McLaren &
8 Spink, 2022), universal transferability to high-performance sport environments (Taylor et al.,
9 2022), and flourishing in sport and life (Gosai et al., 2023). Further studies have aimed to
10 capture the experiences, effects, and nature of psychological safety, within the sport domain
11 (Saxe & Hardin, 2022; Vella et al., 2022).

12 As is the case within the organisational research, sport literature also underlines the
13 facilitating role of psychological safety in creating positive climates. For example,
14 psychological safety is a mediating factor to encourage behaviours such as engagement in
15 decision-making, asking others for help, seeking feedback following mistakes, taking risks,
16 and athlete encouragement to voice their opinions (Fransen et al., 2020).

17 The potential positive impact of psychological safety in creating cooperative
18 environments where athletes feel free to have their voice heard has been noted in recent
19 research (Gosai et al., 2023). It is suggested that athletes who have freedom to openly
20 communicate, in addition to navigating conflict and disagreements with their coaches, are
21 more likely to feel psychologically safe with their fellow athletes. As such, these athletes are
22 more able to take interpersonal risks in the absence of fear of intimidation even in
23 competitive group scenarios (Jowett et al., 2022). Such studies highlight the opportunities
24 which psychologically safe environments may offer in relation to thriving and flourishing.

1 The aforementioned research has built a foundation from which to better understand
2 psychological safety, however it is suggested that conceptualisation within a sport domain
3 still lacks clarity. Vella et al. (2022) highlighted overt problems in relation to how the
4 concept of psychological safety transitions from business to sport contexts. First, the
5 construct lacks an explicit application when applied in a sport context, with the term being
6 used ambiguously. Second, where the term is defined, conflicting characterisations appear.
7 This indicates that despite recognition and wide application in the sport domain,
8 psychological safety remains an underdeveloped concept presently in sport.

9 Taylor et al. (2022) also explored the universal applicability of psychological safety
10 from its existing underpinnings to a high-performance sport setting. They suggest a pressing
11 need for nuance and context-specific evidence as to how researchers and practitioners
12 approach transferability, calling for work to be underpinned by a greater understanding of the
13 applied high-performance context. A better understanding of how psychological safety
14 manifests in sport domains may offer an improved insight into the construct. For example, the
15 current study focused specifically on the high-performance pathway domain which holds
16 unique features (Coutinho et al., 2016) as opposed to elite or recreational sport environments.
17 High-performance pathway sport is generally characterised by programs designed to identify
18 and develop athletes who exhibit the potential for success at the elite level (Johnston et al.,
19 2018), for example national or regional development squads or academies. Acceptance that
20 the unique features of each domain may influence psychological safety differently is a critical
21 perspective through which to consider the concept.

22 A further challenge to better understanding the construct in the sport literature is that a
23 valid and reliable measurement tool has yet to be developed from a sport specific perspective.
24 Edmondson's (1999) initial 7-item questionnaire has been utilised most, however theoretical
25 considerations require further assessment, especially on the wording of the items for sport

1 and the structural validity of the measure (Fransen et al., 2020). A sport specific measure has
2 been attempted by Rice et al. (2022) entitled the Sport Psychological Safety Inventory.
3 However, some apparent limitations with this measure are that in an attempt to measure
4 psychological safety, is that the dimensions (e.g., mental health environment, mental health
5 literacy, low self-stigma) seem to instead assess potential correlates (i.e., mental health) of
6 psychological safety as opposed to the nature of psychological safety itself. For example,
7 many of the items are strongly focused around mental health and wellbeing which moves
8 away from the original definition and understanding of psychological safety (Edmondson,
9 1999). Such findings suggest that further work is essential to better understand the conceptual
10 nature of psychological safety and how it truly manifests in a sport context, to then be able to
11 operationalise the construct (Fransen et al., 2020).

12 **Antecedents of Psychological Safety**

13 Newman et al. (2017) explored conditions, experiences, and interactions which act as
14 antecedents for psychological safety within organisational practices. Such antecedents
15 included supportive leadership behaviours, relationship networks, team characteristics, and
16 individual/team differences. In the sport context, Vella et al. (2022) also acknowledged a list
17 of nine antecedents, which include: (i) settings for psychological safety; (ii) appropriate
18 programme design; (iii) organisational culture, policies, and roles; (iv) coaching behaviours
19 and relationships; (v) leadership behaviours; (vi) parent behaviour; (vii) culture and values;
20 (viii) social interactions; and (ix) absence of negative behaviours. Both studies offer
21 welcomed insights into the contributing factors which foster a sense of psychological safety;
22 however, it is suggested that a further delve into the antecedents, particularly within sport
23 domains would provide a more comprehensive view of the construct.

24 **Outcomes of Psychological Safety**

1 In addition to the antecedents, psychologically safe environments foster a catalogue of
2 consequences or outcomes. These outcomes are deemed well established in the organisational
3 field, with Newman et al. (2017) offering a list of favourable outcomes including improved
4 communication, knowledge sharing, voice behaviour, positive learning behaviour,
5 performance, innovation, creativity, and employee attitudes. Returning to the sport context,
6 Vella et al. (2022) also explored the outcomes afforded by psychological safety. These
7 consequences were grouped into individual and group outcomes. Individual outcomes
8 suggested; i) personal development, ii) mental health, and iii) motivation for continued sport
9 participation. Group outcomes identified; i) social connections, ii) team effectiveness and
10 performance, iii) learning and transfer of knowledge, and iv) social climate.

11 Based on existing literature, an in-depth understanding of the defining attributes,
12 contributing factors, and consequences of psychological safety is yet to be achieved. It is
13 therefore productive for future qualitative research to explore the nuances of perceived
14 psychological safety as it pertains to sport specific situations (McLaren & Spink, 2022).
15 Hence, capturing greater insight on the antecedents, defining attributes, and outcomes of
16 psychological safety may offer greater understanding into how the phenomena manifests
17 within a sport context.

18 Additionally, from a wider sport context, when psychological safety is not present,
19 challenging situations may develop (Cooke et al., 2024). For example, findings from
20 Watcham-Roy's (2022) report identified the presence of a hierarchical environment,
21 maltreatment, grooming, fear of failure, and the athletes' need for a safer environment within
22 Rugby Canada's Olympic 7's programme, noting psychological safety needed to be
23 prioritized. As athlete mental health is currently considered a high priority topic (Purcell et
24 al., 2023; Topping et al., 2023; Walton et al., 2024) it may provide fruitful to further explore
25 the connection and distinction between the two concepts. The current study aims to contribute

1 to a better understanding of psychological safety in a sport context through advancing a clear
2 sport specific conceptualisation.

3 As such, the current study may ultimately offer a more informed understanding of the
4 underpinning defining attributes, antecedents, and outcomes of psychological safety in sport
5 environments. The present study thus aims to glean an insight into the perceptions of
6 psychological safety in high-performance pathway sport from the viewpoint of coaches and
7 athletes in an attempt to address the recognised lack of conceptual clarity surrounding the
8 construct. Coaches were included within the study to offer a broader dyadic perspective of
9 how psychological safety manifests in the high-performance pathway environment and also
10 offered the opportunity to understand if athlete and coach perspectives aligned or differed.

11 **Method**

12 **Research Design and Philosophical Position**

13 The current study provides a qualitative exploration of coach and athlete perceptions
14 of psychological safety through the use of focus groups. Qualitative research was chosen to
15 extract rich and meaningful findings from the participants. A qualitative methodology was
16 used to assist with the describing and interpreting of complex phenomena, while developing
17 and revising understanding of such concepts (Vaismoradi et al., 2016). As psychological
18 safety is a relatively new concept in sport, it was viewed that qualitative methodology, and
19 focus groups in particular, would offer an opportunity to engage in natural, everyday
20 language, that people use to talk about a concept (DeVellis & Thorpe, 2021).

21 The researchers aimed for methodological coherence throughout the study from the
22 outset in order to align the research methods, offer consistency, and avoid bias. This approach
23 strived to ensure congruence between the epistemological and ontological viewpoint, the
24 theoretical perspective, and the chosen methods (Poucher et al., 2020). A qualitative content
25 analytical approach was adopted and an interpretivist approach underpinned the study, based

1 on the notion that each participant possesses their own histories and experiences which will
2 influence their perception of psychological safety. An interpretivist approach considers
3 aspects and differences such as cultures, circumstances, and the construction of different
4 social realities (Alharahsheh & Pius, 2020). Such an approach afforded interaction between
5 researcher and participants' in addition to dialogue between participants during the focus
6 groups. This dialogue provided the opportunity for participants to make sense of their
7 contributions through reinforcement or differing of opinions by their peers.

8 **Participants**

9 A total of 25 participants including 18 athletes and 7 coaches engaged in the study
10 with the sports contributing the following numbers of participants – boxing (n = 7),
11 association football (n = 5), field hockey (n = 6), swimming (n = 7). Focus groups lasted
12 from 36-78 minutes ($M_{\text{length}} = 56$ minutes) and each focus group produced between 13-20
13 pages of transcripts ($M_{\text{length}} = 17$ pages). The focus groups ranged from 3-6 participants with
14 an average of 4.2 participants per focus group.

15 All participants were over 18 years of age and on high-performance pathways to
16 ensure they had relevant experience in relation to psychological safety as a phenomenon, with
17 the ability to draw on a wide range of experiences. Participants completed a demographic
18 questionnaire collecting sample characteristics prior to focus groups commencing.

19 Demographic questionnaire items included sex, age, sport type, and years of experience.

20 Coaches were also asked to provide the amount of coaching experience they possessed while
21 athletes were asked to list the participation experience within their main sport. Athletes were
22 aged 18-24 years old ($M_{\text{age}} = 19.6$ years) and coaches were aged 38-55 years old ($M_{\text{age}} = 45.0$
23 years). Sixteen participants were male and nine were female with ten male athletes and six
24 male coaches and eight female athletes and one female coach. The athletes held between 7
25 and 18 years of experience within their sport ($M_{\text{experience}} = 10.5$ years), while the coaches

1 possessed between 5 and 30 years of coaching experience ($M_{experience} = 16.7$ years). The
2 present study focused on participants actively involved within their sport's high-performance
3 pathway as opposed to elite or recreational environments. Participants drew on their
4 experiences from their time on the high-performance pathway and also within their
5 competitive club environments. All of the athlete focus groups were constructed within a
6 sports specific context, (e.g., hockey players all participating in the same group) without the
7 presence of athletes from other sports. The coach focus groups were conducted in a
8 multisport environment with coaches from different sports coming together to participate.

9 Participants were recruited via their national governing bodies with the four sports
10 involved in the study; two of which can be classified as team sports with the other two mainly
11 focused as individual sports. Head coaches and performance directors from each governing
12 body were identified to lead on recruitment. Each performance director or head coach
13 identified and recruited coaches and athletes who were currently positioned within the sports'
14 high-performance pathway (e.g., regional or international youth squads).

15 **Procedure**

16 Upon obtaining ethical approval, the lead researcher contacted the head coaches and
17 performance directors of each of the four participating national governing bodies to ask for
18 permission to take part in the study. After permission was granted, the lead researcher
19 arranged a time which was suitable for participants to attend an online focus group via Zoom.
20 Prior to engaging in the focus group, each participant received a participant information
21 sheet, and a consent form. Six focus groups took place online over Zoom (two coach focus
22 groups and four athlete focus groups) in order to garner perceptions of psychological safety.

23 **Data Collection**

24 Focus groups were chosen as the most appropriate method for several reasons. First, if
25 participants communicate multiple understandings and meanings, multiple explanations of

1 their behaviour and attitudes are more readily articulated (Gibbs, 1997). Second, focus groups
2 enable the lead researcher to gain a comprehensive understanding of participants'
3 perspectives through detailed discussion and effective moderation (Carey & Smith, 1994). It
4 was deemed that focus groups would also afford the opportunity to gain contrasting views
5 and highlight any differences in perceptions which the coaches and athletes brought forward
6 from their experiences and histories. Coaches and athletes participated in their own specific
7 focus groups without interaction or interference in the other focus groups.

8 Krueger and Casey (2014) suggest that focus groups work best when participants feel
9 comfortable, respected, and free to give their opinions. One such strategy to support these
10 feelings is to ensure that those within the focus group share one or more characteristics
11 (Krueger & Casey, 2014). Within the present study, each focus group ensured that
12 participants shared a variety of common characteristics, for example similar age ranges, life
13 stages, and involvement within the same sport governing body. To reinforce this similarity,
14 the lead researcher recognised the commonalities that existed within the group prior to the
15 focus group commencing. To create a comfortable and respectful environment, the lead
16 researcher aimed to build rapport with each participant early in the discussion by inviting
17 them to share a little about themselves and their sport background. This also provided the
18 opportunity for each participant to contribute verbally early on within the focus group. The
19 lead researcher reinforced the notion that there were no wrong answers and participants were
20 encouraged to share their honest experiences and perceptions. Participants were encouraged
21 to recall on their life histories to help the researchers understand how the participants'
22 perceptions of psychological safety developed. The aim here was to provide clarity of events
23 through the eyes of the individuals who engaged in the focus groups (Ennis & Chen, 2012).

24 Confidentiality was reinforced and participants were asked to remove the names of
25 any coaches, teammates, clubs, or organisations to contribute to the sense of discretion. It was

1 intended that this would also encourage participants to be more forthcoming with sharing
2 their discourse. Participants were also asked to ensure that any dialogue or comments within
3 the focus group stayed confidential and remained within the virtual room. Every focus group
4 began with the lead researcher asking each participant what they thought the concept of
5 psychological safety meant. The participants were then provided with both an audio and
6 visual description of Edmondson's (1999) definition to ensure they understood the context of
7 psychological safety.

8 The focus group structure was broken down into four specific sections with relevant
9 questions and interactions connected to each section. The sections focused on i) introduction
10 and building rapport with the participants; ii) defining and conceptualizing psychological
11 safety in sport; iii) environmental features which influence and are influenced by
12 psychological safety; and iv) the development of psychological safety. The lead researcher
13 provided a definition of psychological safety (Edmondson, 1999) to all participants at the
14 beginning of the focus group.

15 **Data Analysis**

16 Qualitative content analysis was adopted to analyse the data and support subjective
17 interpretation of the data through a systematic classification process of coding and identifying
18 themes or patterns (Hsieh & Shannon, 2005). Qualitative content analysis was chosen as a
19 data analysis technique due to its ability to effectively facilitate the analysis of the results,
20 improve rigor, and offer a deeper understanding of complex human phenomena in relation to
21 research design (Vaismoradi & Snelgrove, 2019). The qualitative content analysis process
22 was characterised by coding, examining of meaning, and provision of a description of the
23 social reality through the identification of themes (Vaismoradi et al., 2016). Upon completion
24 of the focus groups, the session recordings were converted into an audio format file and
25 transcribed verbatim using transcription software. The lead researcher read each focus group

1 file to check the accuracies of the transcription, while concurrently listening to the audio file.
2 The lead researcher then read through each focus group a second time, line-by-line to ensure
3 the written content fully reflected the audio file.

4 Following this, any pertinent and relevant data was identified and coded into themes
5 by the lead researcher. Each theme was then separated into three distinct sections, a) defining
6 attributes, b) antecedents, and c) outcomes. Data was analysed and codes and themes were
7 identified through abductive reasoning (Ryba et al., 2012; Hancock et al., 2018) in that it was
8 neither purely inductive nor deductive. This abductive reasoning approach allows for the
9 recognition of participants unique individual experiences and perceptions of psychological
10 safety, while also realising the opportunity to frame those experiences as antecedents,
11 outcomes, or defining attributes. The framing of identified themes into the categories of
12 antecedents, outcomes, and defining attributes was done after initial coding.

13 The categorization process included origination, verification, and nomination
14 (Vaismoradi et al., 2016). The lead researcher then reviewed and refined the themes after
15 checking the appropriateness of each comment in relation to its section. The lead researcher
16 repeatedly returned to data and the coding process throughout the analysis process to avoid
17 finite interpretation (Vaismoradi et al., 2016). The second author then reviewed the themes
18 and categorisations and discussed any possible alternative interpretations or discrepancies
19 with the first author. The first and second authors met to discuss any discrepancies and
20 encourage reflexivity by challenging each other's construction of knowledge (Smith &
21 McGannon, 2018). The themes and categories were then shared with the other co-authors to
22 serve as critical friends (Smith & McGannon, 2018) to further review and refine themes and
23 categorisation to ensure a level of rigour in relation to the data analysis process.

24 **Methodological Rigour**

1 defining attributes of psychological safety in sport were identified: i) *acceptance, equality,*
2 *and inclusiveness*; ii) *environmental coherence and clarity*; iii) *supportive response to errors*;
3 *iv) freedom to speak freely and raise issues*; and v) *freedom to take risks*.

4 **Acceptance, Equality, and Inclusiveness**

5 Participants highlighted that psychologically safe environments were characterised by
6 a sense of acceptance, equality, and inclusiveness. The team members felt psychologically
7 safe when an absence of favouritism existed and each individual was treated with equality.
8 Athletes felt psychological safety was present when they enjoyed group integration, while
9 sensing an absence of exclusivity, with status hierarchy eliminated. Athlete E (hockey, male)
10 described how perceived inequality eroded psychological safety and in turn reduced his
11 willingness to contribute verbally to the group:

12 “I think that's where you might feel like no one really values your
13 opinion, you might have a good idea to say something, but you might
14 not have the courage to say it just because you're not that high up in
15 the team or whatever.”

16 Within the coaches focus group, Coach B (swimming, male) described how he proactively
17 worked on and engaged with the people who he did not naturally have a relationship with, in
18 order to create acceptance in the group and improve psychological safety for those athletes.

19 **Environmental coherence and clarity**

20 A number of athletes described coherence and clarity in their immediate environment
21 as key factor in relation to psychological safety. These athletes felt safe when those in
22 positions of power (coaches, performance directors, etc.) communicated with clarity on their
23 vision, goals, expectations, and provided athletes with a sense of purpose within their
24 environment. This provided an opportunity to align their behaviour and practices accordingly.

1 When athletes sensed ambiguity around the vision and environmental expectations,
2 psychological safety was diminished. Athlete B (Swimming, male) noted:

3 “When I’m familiar, I have always felt most safe. Whenever I feel in
4 control of my emotions, and whenever I feel in control of what I’m
5 doing. Whenever I feel like what I’m doing is beneficial, and what I’m
6 doing has a has a purpose, or is purposeful. When everything is
7 purposeful and everything has a meaning behind it.”

8 These findings indicated that a psychologically safe environment is characterised by clarity of
9 purpose and the absence of ambiguity, in coherence with actions, language, and expectations.

10 **Supportive Response to Errors**

11 A key aspect of psychological safety was a supportive response to errors from
12 coaches and teammates. Errors are clearly an unfavourable feature in any sport, however
13 psychologically safe environments create space to learn from errors when they occur.

14 Tolerance for mistakes does not equate to the absence of high expectations, rather when an
15 athlete feels psychologically safer, they may view errors as an opportunity to learn.

16 Both coaches and athletes described how supportive response to errors contributed to greater
17 psychological safety and how the opposite response reduced a sense of safety. Athlete D
18 (swimming, female) reinforced this notion:

19 “If a coach shouted at me, if I tried, if I really tried hard, but it just
20 didn't go well. If I really put in all the effort, and they were like, oh,
21 that was a really bad swim, you should be disappointed or you should
22 be embarrassed. If they spoke down to you, I think that would make
23 you feel unsafe.”

24 Athlete E (hockey, male) reflected on what a psychologically safe environment
25 looks like when an error occurs:

1 “somebody makes a mistake on the pitch, they cost us the goal or
2 whatever, and the teammates are immediately around them and putting an
3 arm around the shoulder and saying, come on, lift your head up, let's get
4 back in”.

5 **Freedom to Speak Freely and Raise Issues**

6 When experiencing psychological safety, the athletes felt they can ask questions to
7 coaches and teammates within their environment and raise issues and challenges without fear
8 of consequences. Such experiences often happened within ‘off-field’ scenarios such as team
9 meetings, discussion sessions, and coach athlete meetings, but can also occur ‘on-field’
10 during training and competition. If athletes do not feel safe to raise issues or speak freely, it
11 can often lead to a culture of silence where athlete’s feel they cannot speak up with regards to
12 issues or challenges they face. Athlete J (hockey, male) suggested that when athletes felt
13 psychologically safe, they felt more honest and direct with teammates with both positive or
14 negative reinforcement, including being comfortable with ‘calling someone out’. He stated
15 “if it's a really safe environment. Anyone could call anyone out. Anyone could compliment
16 anyone, you know”. This was reinforced by Athlete O (hockey, male), who suggested:

17 “Together you can build environments where calling someone out can
18 be completely beneficial rather than negative. As long as no one takes
19 anything too personally, and you build a relationship where you’re
20 able to say that sort of thing to the person.”

21 Athlete F (hockey, male) recognised the role of power between the coach and
22 athlete in this instance:

23 “if the coach, if they're part of the problem, or how you perceive the
24 problem, then you're not going to speak up to them, because you feel

1 like you're not going to get anywhere and then it's just a downward
2 spiral from there because you're not speaking”.

3 **Freedom to Take Risks**

4 Another defining attribute of psychological safety was the feeling that athletes were
5 free to take risks during training and competition sessions. Athletes felt they could be
6 creative, innovative, and inventive without the fear of negative consequences from coaches
7 and teammates. It is important to note disparity between supportive response to errors and the
8 freedom to take risks. For example, an error on the field of play may not be related to ‘taking
9 a risk’ and could occur via many different means. Many of the risks taken were highlighted
10 within an ‘on-field’ scenario where the athletes were participating in training or competition
11 scenarios. Athlete G (football, female) noted that when psychological safety was high,
12 connections were formed and such connections allowed for a greater acceptance of mistakes.
13 When mistakes were accepted, athletes could be more innovative, try new ideas and take
14 more risks. Especially when they felt free from negative consequences. She stated:

15 “Its like we just have a connection, and it does give you confidence
16 on the pitch as well. You feel like you can go out there and perform
17 with confidence in each other as well. Everyone accepts mistakes and
18 you go out there and work hard and try new things.”

19 Coach A (football, female) described how psychologically unsafe environments
20 may frown upon athletes who are viewed as ‘risk takers.’ She stated:

21 “if he or she is a little bit of a risk taker, the coach may feel that
22 they're the talented player, but the attitude doesn't match the tactics or
23 strategy”.

24 **Antecedents**

1 The antecedents category reflects the events which precede psychological safety in
2 high-performance pathway sport (Walker & Avant, 2011). Nine themes of antecedents were
3 identified, namely: i) *coaching behaviours*; ii) *external influences*; iii) *positional competition,*
4 *selection, and deselection*; iv) *performance cognitions*; v) *communication norms*; vi) *athlete*
5 *leadership behaviours*; vii) *status attributes*; viii) *transitions*; and ix) *social connections*.

6 **Coaching Behaviours**

7 The impact of coaching behaviours evidently influenced the psychological safety of
8 athletes. Athletes felt the coaches' voice behaviours which were characterised by empathy,
9 appreciation, trust, belief, patience, reassurance, consistency, and support fostered a sense of
10 psychological safety. Athletes also clearly recognised the impact of negative coaching
11 behaviours in reducing psychological safety. It was suggested that if a coach did not
12 acknowledge effort and reacted unreasonably negatively to a poor performance that would
13 diminish safety. Coach E (football, male) brought balance to this by suggesting that exclusive
14 use of positive coaching behaviours all the time can lead to detrimental results in the long
15 term. He noted:

16 “You have to get a balance of not mollycoddling them too much. I
17 think you have to have that balance. Especially letting them know,
18 this might happen to you, and this might happen to you and try and
19 prepare them. They can't have it as all nicey nicey nicey all the time,
20 there has to be a balance where you have to maybe shout at them at
21 times, and I'm just trying to get that balance right.”

22 **External Influences**

23 External influences are deemed to be facets which are significant aspects of athletes'
24 lives, which sit outside but indirectly influence the sport environment (e.g., educational
25 commitments, home life, parental involvement, governing body funding support). Both

1 parental engagement and education were common external influences. Athlete K (swimming,
2 female), highlighted the impact parents can have on psychological safety for athletes:

3 “You may feel unsafe with your own parents, but also other parents.
4 Like I had an instance, a number of years back where I'd quit and I'd
5 come back. I had gone into a higher squad than this other person, and
6 the parent voiced that they were unhappy that I shouldn't have gone
7 back to that squad. And that was very negative on my point of view.”

8 Educational pressures were also mentioned as a detractor for psychological safety with many
9 athletes juggling school with their sport. As athletes reached the higher levels of the pathway,
10 funding became an issue which could diminish psychological safety. Funding related to
11 results was ultimately related to diminished psychological safety as athletes were more likely
12 to fear consequences of errors or underperformance. These examples potentially demonstrate
13 that while an athlete's psychological safety is certainly influenced by factors within the sport
14 environment, wider life factors may also have a contributing role.

15 **Positional Competition, Selection, and Deselection**

16 Athletes highlighted the fear associated with non-selection or failure in relation to
17 achieving performance targets. It was evident that the threat of non-selection actively
18 diminished an athlete's sense of psychological safety. Athlete G (hockey, male), noted that:

19 “I guess how competitive the setup is, if it's under 21's (international
20 squad), people are trying to get a place in the squad, that's probably
21 going to be more tense than if you're at a club setting or even a school
22 setting where you're very sure of your place on the team.”

23 Sport can be an inherently unsafe place at times and when selection and de-selection are
24 introduced, psychological safety is often challenged. Coach B (Swimming, male) suggested
25 that one solution is to ensure developmental athletes are guaranteed a full year on the squad

1 before de-selection. This solution may offer an example of how psychological safety can be
2 improved, however the concept of positional competition (Harenberg et al., 2021), selection,
3 and de-selection will almost always ensure that psychological safety will be challenged at
4 some point throughout the season for most athletes.

5 **Performance Cognitions**

6 Performance cognitions refer to thinking about past or future performances and/or
7 gaining/losing perspective of where sport exists in the athlete's overall life. Coach C
8 (swimming, male) describes where athletes are prone to 'overthinking':

9 "You're (the athletes) going to be swimming in season meets, where
10 you're in full training load, you're tired, or there's stuff going on
11 school, or you're mentally just not there. And if you have four or five
12 of those in a row, then why would you not walk away from the sport?

13 We want to teach them that it's a process that they go through that
14 trying to change parents' opinions and athletes' opinions that it's not
15 black and white, and it's not success and failure, that it's a
16 development curve."

17 Athlete E (hockey, male) also describes the concept of overthinking as a mitigating factor of
18 psychological safety, "why did that (poor performance) happen? And then I started spending
19 all this time thinking and thinking, you just run around in circles? You just waste some time."

20 **Communication Norms**

21 Environments characterised by psychological safety encouraged the athletes to
22 communicate more effectively. Coach D (boxing, male) describes this as, "They just feel safe
23 to be themselves and communicate. Whatever you want to talk about, it doesn't always have
24 to be a comfortable conversation, we can also have uncomfortable conversations". Creating

1 opportunities for open, direct, and honest communication supported the athletes' sense of
2 psychological safety. Athlete J (hockey, male) notes:

3 “Like having a little chat at training, saying ‘I know I'm not doing my
4 best’. But, you know, hopefully the coach gives you a couple of
5 reassurances. He doesn't just give up on you, that would make me feel
6 safe. If that happened to me, those conversations, the senior players in
7 the team or the coach saying just to keep it up and stuff like that.”

8 Communication was deemed to be a key construct in relation to psychological safety. When
9 clear and open communication was afforded to the athletes from those in positions of power
10 (e.g., coaches and senior athletes), it invited the athletes voice into the setting and in turn
11 encouraged them to communicate with a greater sense of psychological safety.

12 **Athlete Leadership Behaviours**

13 Athlete leadership behaviours are defined as the supportive interactions with senior or
14 central athletes who hold formal or informal leadership roles within the team or squad which
15 can influence individual and team outcomes (e.g., Paradis & Loughead, 2012). Athlete
16 leadership behaviours acted as antecedents to psychological safety in the sport environment
17 for the participants in this study. Athlete C (football, female) notes that supporting younger
18 players to have a voice will help create psychological safety within the group as a collective:

19 “Coming through as a younger player it was always the older ones
20 that spoke up, and I've created an environment, for younger players to
21 speak up. And then if that's encouraged, then everyone will then
22 contribute. Whereas if it's the same people contributing all the time,
23 then you just rely on them more so to speak up than everyone being in
24 a collective group.”

25 **Status Attributes**

1 Findings indicated that athletes who felt they held senior or central status within the
2 team or squad potentially experienced higher levels of psychological safety and as such this
3 status acted as an antecedent. Athlete F (hockey, male), suggested, “When you step up as a
4 teenager, on a men's team, you're not as confident to speak up. Talking to a big group of older
5 people, so that's probably a big factor”. Athlete G (hockey, male), also reinforces this notion,
6 “If you're one of the senior players on team, you're probably a bit safer. So that probably then
7 provides a better mindset or a safer psychological mindset”. Holding a senior or central
8 position within the team or squad seemed to result in greater perceptions of safety, as such, a
9 lack of status may lead to one feeling unsafe. This potentially raises considerations for
10 coaches or athletes to welcome, support, or mentor new or younger athletes joining squads
11 for the first time, should they want to establish higher levels of psychological safety across
12 the collective group.

13 **Transitions**

14 Transitions refers to any change to the environment, personnel, or responsibilities for
15 the athlete, for example, an athlete progressing into a senior squad from an under 21's
16 programme or adopting a new leadership role. Coach E (football, male) reflected on how
17 coaches could support a transition to ensure a greater level of psychological safety:

18 “Part of creating psychological safety is that transition into the
19 environment. The coach taking time to understand how the athlete is
20 likely to react in different situations, what their personality is. Not
21 every athlete immediately reacts well if they come into a new
22 environment, and if I just continue to coach the way I normally coach,
23 they can feel intimidated and they can feel psychologically unsafe in
24 that situation because that's not what they're used to.”

1 Athlete L (Boxing, male) noted that such transitions can negatively influence
2 psychological safety, at least in the short term. In terms of voice behaviour,
3 athletes were less likely to feel a sense of safety to raise issues or concerns in the
4 early stages of transitioning to a new environment:

5 “Going into a high-performance setup, I think is challenging for a lot
6 of people. Especially if you've been boxing in your club for years and
7 then automatically, you're in this environment where there's a lot of
8 anxiety, a lot of new people where you're going, you're maybe away
9 for a number of weeks at one place or maybe at a training camp and if
10 you're not used to it that can be mentally tough”.

11 **Social Connections**

12 Social connections between teammates and coaches were deemed as an antecedent for
13 psychological safety. Many described such connections as offering a sense of safety as well
14 as feelings of togetherness, confidence, and friendship. Athlete D (swimming, female) noted:

15 “I've been in my club, like my entire swimming career. I feel like, I've
16 also moved up through the squads with the same people since I was
17 maybe like seven or eight years old. So, since I'm so close to them, I
18 know them so well. And I've known my coach for like 12 years now.
19 So, I know everyone so well, that I just feel safe, because it's like
20 going to training with some of my best friends every time.”

21 Athlete G (Hockey, male), described that when social connections are not as
22 strong, athletes are less likely to speak up towards their teammates in relation to
23 mistakes:

24 “the squad around you like in school, you're playing with your mates,
25 they'll happily point out your mistakes, and you'll move on. But let's

1 say there's lads that you don't know very well, you might be afraid to
2 talk to them, they might be afraid to talk to you. So it's kind of hard to
3 fix these things when there's new faces”.

4 Many of the relationships described in the research have developed over time, giving
5 consideration as to how coaches can further develop and cultivate a sense of psychological
6 safety by fostering social relationship development especially in environments with high
7 player turnover.

8 **Outcomes**

9 The outcomes category documents the impact derived from athletes feeling a sense of
10 psychological safety. Six themes of outcomes were identified, including: i) *positive climate*
11 *and enjoyment of sport*; ii) *learning and improvement*; iii) *mental health and wellbeing*; iv)
12 *holistic development*; v) *trust and support*; and vi) *positive relationships*.

13 **Positive Climate and Enjoyment of Sport**

14 Findings demonstrated that psychological safety is acknowledged as being positively
15 associated with enjoyment. A positive climate of ‘enjoyment’ was mentioned frequently by
16 both coaches and athletes when psychological safety was present. Athlete H (swimming,
17 male) noted the role of the coach in creating a positive climate. He shared:

18 “When it's a bit more light-hearted, even if your coaches are just in a
19 good mood, like cracking jokes and everyone's happy, that can make
20 you feel quite safe. It can be quite a tough sport. You're always
21 fighting for milli-seconds, especially when you get older. I think you
22 feel it when there's that enjoyment element. Like everyone's
23 supporting each other.”

24 **Learning and Improvement**

1 Learning and improvement was identified as an outcome. Coaches also acknowledged
2 the role psychological safety can play in supporting the growth of players. Coach C
3 (swimming, male) stated:

4 “I’m working on at the moment, that mistakes are normalised both for
5 the athlete and the coach. I’ve been using a transaction recently as
6 ‘you’re here to make mistakes.’ And that’s how we learn as we move
7 forward. So, it’s okay to get it wrong. And I’m not going to react
8 negatively because of that, and that’s great because that means we
9 learn something then we move on.”

10 Coach B (swimming, male) also shared how psychological safety can encourage
11 athletes to work on their weaknesses and talk about failure in order to improve:

12 “You know, where they can come to you after a race and talk through
13 what went wrong? What went well? You know, what did you bring in
14 the training beforehand.”

15 A lack of psychological safety may inhibit these types of conversations if the athletes feel
16 they cannot discuss their current limitations or find solutions with their coach. When Athlete
17 P (football, female) experienced a sense of unsafety, they described they would never take
18 risks, try anything creative or different, and always “play it safe” in training or games. It
19 could be imagined that ‘playing it safe’, when results are paramount may be a useful and
20 successful approach, however in high-performance pathway sport where it is largely
21 developmental this may be seen as a limiting method by many coaches.

22 **Mental Health & Wellbeing**

23 Participants noted the connection between positive mental health and wellbeing with
24 psychological safety. It was also recognised when athletes did not experience enough safety
25 to bring their voice into the room, negative outcomes for wellbeing can arise. Athlete L

1 (boxing, male) highlighted a high-level example of abuse where the athlete did not possess
2 the safety to speak up, but finally found the strength to discuss the issues. He stated:

3 “That takes a lot of courage, especially in the Olympic Games. We’re
4 in boxing and it’s perceived to be tough. I think her coming out and
5 doing that (speaking up) was actually a big thing. Because it made
6 people go, we can actually start to speak out about our problems.”

7 Athlete L (boxing, male) suggested that high levels of psychological safety, could lead to a
8 stronger feeling that athletes could talk about issues, especially related to their mental health
9 and wellbeing. His example also indicated that if an athlete does not feel psychologically
10 safe, then issues such as the very serious issue of abuse in this case, remain undisclosed with
11 negative outcomes for mental health and wellbeing. This highlights the important conceptual
12 distinction that psychological safety can lead to mental health and wellbeing outcomes (i.e., a
13 correlate), but is not the same as the nature of mental health in itself.

14 **Holistic Development**

15 A number of the coaches within the current study identified holistic development as a
16 consequence of psychological safety. Coach A (football, female) describes holistic
17 development as ‘seeing the person first, then the athlete’, ultimately helping them develop
18 holistically in other aspects of their life, not solely sport. Coach D (boxing, male) reinforced
19 this notion by suggesting that psychological safety can lead to the athlete feeling that “your
20 interest is in them, not in just their sport performances”. This was deemed to support the
21 athletes with other life development skills.

22 **Trust and Support**

23 The athletes within the current study reported that psychologically safe environments
24 fostered a greater sense of trust and a stronger feeling of support. Athlete O (hockey, male)
25 highlighted the important link between psychological safety and trust:

1 “Having a good trust between you both (coach and athlete), that
2 they're in your corner, looking out for you, they'll be there throwing
3 the towel in if needs be or whatever, if you have that trust that makes
4 you feel psychologically safe and vice versa.”

5 Athlete C (football, female) describes the aspect of support as an outcome of
6 psychological safety, especially with teammates:

7 “If you have a supportive teammate, everyone's really supportive
8 within that group, you can ask each other silly questions, but then
9 your coach is looking down at you, that defeats the whole purpose. If
10 you have supportive teammates, and a supportive coach, then you're
11 just going to feel like at the top level (of psychological safety).”

12 The quote suggests that trust and psychological safety can potentially be a consequence of the
13 other. Peer support was mentioned frequently throughout the focus groups, suggesting that
14 while coaches undoubtedly contribute, trust in fellow athletes can heavily influence
15 psychological safety within clubs, teams, and squads.

16 **Positive Relationships**

17 Positive relationships were deemed to be an outcome of psychological safety. These
18 referred to both coach–athlete relationships, and the relationships between peers. Athlete K
19 (swimming, female) stated: “the key to psychological safety, like being afraid to ask
20 questions and be vulnerable, I think comes down to coach-athlete relationship. If you don't
21 talk to your coach, I don't think you can feel fully safe.” Many of the athletes recognised it
22 was their responsibility to contribute to and maintain those relationships when safety had
23 been established. Athletes also highlighted the role of communication in supporting these
24 relationships: Athlete E (hockey, male) said “if you feel awful? And you don't tell them?
25 How do you expect them to know?”. While positive relationships seem to be a consequence

1 of psychological safety and can reinforce it a lack of quality relationships is likely to weaken
2 interpersonal psychological safety.

3 **Other Considerations**

4 Although many of the comments from coaches and athletes leaned towards the
5 positive aspects and manifestation of psychological safety in sport, one comment questioned
6 this notion. The comment came from Coach E (football, male) who suggested that
7 psychological safety can actually have the capacity to hinder athletes' development at times.

8 "I think a challenge, sometimes is actually when we create such a
9 psychologically safe environment that actually hinders athletes'
10 progression as they don't want to move on (along the high-
11 performance pathway). If it ever gets to that point, it is probably
12 slightly unhealthy."

13 While this comment was an outlier it is important to acknowledge to continue to better
14 understand exactly how psychological safety manifests within sport. Athletes also highlighted
15 that everyone within the environment had a responsibility to improve psychological safety for
16 all. Athlete L (boxing, male) suggests that:

17 "You've got your main club coach who's responsible to make sure
18 that everyone's okay, but if they (players) don't speak up, then they
19 also can't know. So, it's kind of a working relationship between
20 everyone. And then just having someone within the club or whatever,
21 who, you can speak to you if needed, if the team wants to go and
22 speak to a coach or whatever, like if it's there's a contact there that
23 they can push on to us."

24 Athlete C (football, female) reinforced this notion, stating, "It's everyone's (responsibility),
25 it's the whole group, you know, the coaches, the athletes, the teammates, the parents, the club

1 officials, it's everyone's. That's for your culture, you know, while driving that, then creating a
2 psychological safe environment”.

3 **Discussion**

4 The purpose of the present study was to garner athlete and coach perceptions of
5 psychological safety in sport. The findings depicted the understanding of psychological safety
6 pertaining to the defining attributes: (i) acceptance, equality, and inclusiveness; ii)
7 environmental coherence and clarity; iii) supportive response to errors; iv) freedom to speak
8 freely and raise issues; and v) freedom to take risks); the antecedents (i) coaching behaviours;
9 ii) external influences; iii) positional competition, selection, and deselection; iv) performance
10 cognitions; v) communication norms; vi) athlete leadership behaviours; vii) status attributes;
11 viii) transitions; and; ix) social connections; and the outcomes (i) positive climate and
12 enjoyment of sport; ii) learning and improvement; iii) mental health and wellbeing; iv)
13 holistic development; v) trust and support; and vi) positive relationships) of psychological
14 safety within high-performance pathway sport. This study has brought to life findings that
15 may support a greater understanding of how psychological safety may manifest in different
16 settings within the sport environment. The present study adds to the growing body of
17 literature around psychological safety in sport by highlighting three distinct concepts:
18 a) psychological safety may be experienced both ‘on-field’ (during competition and practice
19 sessions) and ‘off-field’ (during team meetings/group gatherings); b) psychological safety is
20 experienced on an individual level; and c) when psychological safety is absent certain risks
21 may be amplified.

22 **Dual Nature of Psychological Safety (on field & off field)**

23 Much of the organisational literature on psychological safety (Edmondson, 1999;
24 Edmondson, 2018, Newman et al., 2017) describes the work environment as a singular entity.
25 While the overall sport environment may be captured as a singular setting, aspects which

1 influence psychological safety on the field and off the field varied, as did the response from
2 the athletes. For example, athletes may have a sense of freedom to take risks on the field
3 however the same athlete may feel less safe in relation to raising an issue with a coach or
4 teammate when away from training or competition spaces. Likewise, an athlete who is
5 comfortable raising issues, asking questions, or contributing to leadership conversations may
6 not feel psychologically safe to try something new, be innovative, or take a risk on the field.

7 Due to the underdeveloped conceptual clarity on the topic (Taylor, Collins, et al.,
8 2022; Vella et al., 2022) it is important that dialogue development on psychological safety
9 connects with, and remains true to, the original definition (Edmondson, 1999) to avoid
10 misperception on the use of the term. Based on this finding, one could surmise that the
11 original definition can be applied to sport settings, but it is important to consider both the on-
12 field and off-field contexts when assessing or trying to foster a sense of psychological safety
13 in sport settings.

14 **The Risks Associated with the Absence of Psychological Safety**

15 Although the participants in the current study described various features of
16 psychological safety based on their own perceptions, discussion often referred to the
17 outcomes when psychological safety is not present. One athlete described how athletes can
18 remain silent about serious issues when they do not feel psychological safety is present. Poor
19 group dynamics such as low cohesion (Appelbaum et al., 2020) or team conflict (Paradis et
20 al., 2014) could also lead to a sense of unsafety. A key component of psychological safety is
21 the ability to speak up without fear of consequence (Edmondson, 2018). If an athlete does not
22 feel safe enough to communicate their concerns, their challenges, and issues (major and
23 minor), they may often continue for much longer than necessary, limiting their potential to
24 thrive and flourish (Gosai et al., 2023) in the sport context.

1 As noted, both coaches and athletes were included in the study to offer a variety of
2 perspectives on psychological safety. Evidently, the coaches' and athletes' views on the
3 construct often aligned. This finding is useful in relation to creating dialogue around
4 psychological safety as an overall concept between coach and athlete. A number of the
5 coaches were also able to reflect on their past behaviours and interactions which detracted
6 from the psychological safety of their athletes and the impact of when psychological safety
7 was absent.

8 High-profile examples of psychological maltreatment (Stirling, 2009) have been
9 highlighted in recent years (Watcham-Roy, 2022). Those in positions of power within sport
10 (coaches, national sport organisations, club administration, etc.) may want to encourage a
11 sense of psychological safety to mitigate against a 'culture of silence' (Edmondson, 2018).
12 While the specific benefits of psychological safety continue to be debated and defined, it is
13 critical to research and practice to report on the impact of when psychological safety is not
14 present and athletes do not feel like they can raise issues or concerns.

15 **Individual Perceptions of Psychological Safety**

16 Psychological safety has been discussed as both a team and individual construct with
17 various underpinnings supporting both perspectives. The sport literature has highlighted that
18 psychological safety contributes to both individual and group orientated outcomes (Fransen et
19 al., 2020; Vella et al., 2022) with further calls to explicitly explore variances between group
20 and individual perceptions of psychological safety (Saxe & Hardin, 2022). While
21 commonalities did exist within the participants in this study, it is worth noting that
22 individuals perceived varied experiences in different ways, placing different meaning and
23 importance to the experiences, scenarios, and situations which either fostered or hindered
24 psychological safety. It is worth noting that the authors are not suggesting that an
25 environment must hold every sub-theme equally and simultaneously for all athletes to

1 experience a sense of psychological safety. If psychological safety is related to the
2 individual's experiences and perceptions, then any given athlete may value the presence and
3 prevalence of one particular category over another. Likewise, these categories are unlikely to
4 be equally present at all times, nor remain stagnant, but are rather dynamic and fluctuate with
5 coach and player turnover, over the duration of an athlete's tenure on the team. As such, this
6 connects to one of the main findings related to the individual perception connected to
7 psychological safety.

8 Interestingly many of the defining attributes, antecedents, and outcomes of
9 psychological safety were experienced by both team and individual athletes. No clear
10 differences between team and individual sports were noted within this study. This notion may
11 further reinforce the individual's perceptions of psychological safety. For example, one of the
12 antecedents identified was athlete leadership behaviours, whereby senior athletes played a
13 significant role in fostering or diminishing psychological safety. This was communicated by
14 both boxers and footballers, suggesting that this example and others may have a significant
15 role to play in both an individual and team sport environment.

16 It was evident within the current study that psychological safety is a complex concept
17 underpinned by many moving parts. It is suggested that the participants in the current study
18 did not view psychological safety as a fixed state once it had been achieved but rather
19 dynamic and fluctuating based on many factors such as coach and player turnover. Many
20 examples were shared regarding elements which made athletes feel safer and elements which
21 made athletes feel less safe. This advances the idea that psychological safety cannot be turned
22 on and off like a switch. In fact, there are aspects which move athletes closer to, or further
23 away from, a sense of safety, like on a continuum (Bowers et al., 2014).

24 With this in mind it may be over-reaching to suggest that the same intervention or
25 interaction can create a sense of psychological safety for every individual or team across the

1 board. From a practical viewpoint, coaches may want to consider obtaining greater insight
2 into the antecedents, behaviours, and scenarios which foster psychological safety for each
3 individual athlete in their squad, team, or training group. Such insight may prove beneficial in
4 developing positive coach-athlete relationships (Jowett et al., 2022) and designing bespoke
5 individual plans to invoke greater levels of psychological safety in the athletes they coach.

6 **Limitations and Future Research**

7 When interpreting the findings of an investigation of this kind, it is important to
8 recognise some of the potential drawbacks. The first limitation related to the current study
9 was based on the narrow focus, specifically on one domain within the sport pathway –
10 performance pathway sport. The athletes and coaches interviewed were part of their
11 governing body performance pathway programmes. Those competing at recreational or elite
12 levels may have shared different a different view based on the demands, objectives, and
13 structures associated with those particular domains. While exploring the nuances of perceived
14 psychological safety pertaining to specific sport situations has been supported (McLaren &
15 Spink, 2022), it is useful to keep in mind that different domains may provide different
16 perceptions.

17 A second limitation is that psychological safety in sport is still a relatively new
18 concept for researchers and practitioners, and likewise for the athletes and coaches engaged
19 in the study. The lead researcher aimed to mitigate against confusion over the term by using
20 the original definition (Edmondson, 1999) to keep participants from referring to other similar
21 sounding but distinct concepts such as mental health and wellbeing however sometimes the
22 meaning of terms were conflated among participants.

23 A third limitation is related to the cultural aspects which may underpin psychological
24 safety. All the participants were based within Ireland and the United Kingdom and hence

1 experienced similar cultural experiences in relation to their sport systems. Perceptions of
2 experiences and scenarios which foster psychological safety here may vary in other cultures.

3 A fourth limitation is that the athletes and coaches engaged in online focus groups as
4 opposed to in-person interactions. An online interaction is useful for logistical reasons
5 however from a facilitator point of view, even with cameras on, subtle interactions like body
6 language, gestures, or facial expressions are potentially less likely to be picked up.

7 Three main recommendations for future research can be drawn from the current study.
8 Firstly, a valid and reliable measure for psychological safety in sport, based on its original
9 definition, is still absent. The development of such a tool would offer a more informed and
10 objective approach to gauging the psychological safety levels within athletes. Secondly,
11 exploring perceived psychological safety in different sport environments and domains
12 (McLaren & Spink, 2022) will allow for better understanding of the nuances (if any) in each
13 of these settings (e.g., elite, or recreational). Thirdly, it may be valuable to explore if a greater
14 sense of psychological safety can support athletes to speak up and address serious issues
15 (e.g., abuse) and challenges to their psychological wellbeing in a timelier fashion.

16 **Practical Implications**

17 From a practical perspective, clubs, national associations, and sport organisations,
18 may want to gauge the level of psychological safety of the athletes within their programmes.
19 As noted in this research, the absence of psychological safety can potentially offer a negative
20 outcome in relation to athletes suffering within a culture of silence when psychological safety
21 is not present. From a coaching perspective, it may be worthwhile for coaches to explore if
22 and when it is appropriate for their athletes to experience greater levels of psychological
23 safety both on and off the field. For example, on the field, coaches may want to encourage
24 and support more risk taking and innovative practices during pre-season but less so during a
25 final or must win fixture. In an off-field scenario, coaches may want to overtly create

1 opportunities to invite the athletes voice into the room to ensure personal issues and
2 challenges do not go unnoticed or unheard. If as suggested, positive mental health is a
3 potential outcome of psychological safety, then sport organisations may want to explore
4 potential psychological safety interventions if they deem improved mental wellbeing as
5 priority for their athletes.

6 Additionally, this research has identified that psychological safety in sport possesses
7 an individual property, influenced by the individual's perspectives, histories, and experiences.
8 With this in mind rather than suggesting an environment is psychologically safe for everyone,
9 one may aim to explore the psychological safety levels of athletes as individuals. The
10 research has also demonstrated an extensive list of antecedents that either mitigate against or
11 foster a sense of psychological safety. For coaching practitioners, an opportunity exists to
12 reflectively map their coaching behaviours against these items and recognise how many of
13 these antecedents are present within their current practice as well as the impact each has on
14 their athletes' psychological safety.

15 Finally, as psychological safety is a relatively new concept in both sport reasearch and
16 practice, creating coach education opportunities to communicate the topic to coaches may
17 provide fruitful in supporting its integration into practice at the coalface of sport. This would
18 also be useful to connect the topic to its original definition and avoid the concept becoming a
19 buzzword or an ambiguous term within sport.

20 **Conclusion**

21 The present study aimed to offer a contribution towards a better understanding of
22 psychological safety in a sport context and support the advancement of a clear sport specific
23 application and conceptual clarity around the topic. The study focused on capturing the
24 explicit nature of psychological safety in a sport context. The study also identified a range of
25 antecedents which influence psychological safety in sport, in addition to its related outcomes.

1 Psychological safety in sport is a complex concept and full conceptual clarity will require on-
2 going research attention to be fully achieved. However, the current study has attempted to
3 outline and distinguish between the nature or attributes of psychological safety, and its
4 antecedents and outcomes. Several unique and novel findings have been identified within the
5 present study. The current study has also identified that psychological safety in sport can
6 manifest in both 'on-field' and 'off-field' settings and consideration should be given to both.
7 The study also identified that when psychological safety is absent, athletes may be less
8 comfortable speaking up about issues or challenges they are facing. Psychological safety is
9 dynamic and may exist on a continuum with various experiences, scenarios, and events either
10 fostering or hindering a sense of psychological safety for the individual or team.

11 It is likely that the concept of psychological safety is not presently embedded in coach
12 education and development programmes, either formally or informally. Coach education
13 providers may want to consider if sharing learning opportunities or communities of practice
14 related to psychological safety would be useful in supporting coach development (Cooke et
15 al., 2023). Additionally, such stakeholders may want to consider the impact and return around
16 promoting psychological safety across the competition and athlete development spectrum.

17 Rather than seeing psychological safety as a buzzword or perceiving it as a 'silver
18 bullet' to fix all challenges, the authors call for a balanced, albeit considered stance for major
19 sporting bodies to explore the psychological safety levels within their organized sports
20 settings. Psychological safety is a valuable concept for key sporting stakeholders to consider
21 and may offer a significant advantage to such organizations and individuals based on the
22 findings of this study. From a practical point of view, coaches and governing bodies should
23 consider viewing psychological safety from an individual perspective, explore the safety
24 levels of athletes in a dual context (on & off the field), and consider the impact of an absence
25 of psychological safety.

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Figure 1

Categories and Themes

Defining Attributes	i.	Acceptance, equality, and inclusiveness
	ii.	Environmental coherence and clarity
	iii.	Supportive response to errors
	iv.	Freedom to speak freely and raise issues
	v.	Freedom to take risks
Antecedents	i)	Coaching behaviours
	ii)	External influences
	iii)	Positional competition selection, and deselection
	iv)	Performance cognitions
	v)	Communication norms
	vi)	Athlete leadership behaviours
	vii)	Status attributes
	viii)	Transitions
	ix)	Social connections
Outcomes	i)	Positive climate and enjoyment of sport
	ii)	Learning and improvement
	iii)	Mental health and wellbeing
	iv)	Holistic development
	v)	Trust and support
	vi)	Positive relationships