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Team Resilience in Women’s High-Performance Football: Contextual Stressors and Opportunities for Development

Adrienn Szabadics¹, Paul Morgan¹, Mustafa Sarkar², Desmond McEwan³, and Fiona McCormack¹

¹Buckinghamshire New University

²Nottingham Trent University

³University of British Columbia

Author Note

The authors report there are no competing interests to declare.

Correspondence concerning this article should be addressed to Adrienn Szabadics, Buckinghamshire New University, Queen Alexandra Rd, High Wycombe HP11 2JZ.

Email: adrienn.szabadics@bucks.ac.uk

1 **Abstract**

2 The purpose of this study was to conduct a pre-intervention team resilience needs
3 assessment in the context of high-performance women's football. The needs assessment
4 included a review of the literature, focus group discussions, and input from an expert
5 steering group. Following scoping meetings with senior personnel from the National
6 Governing Body, teams in the top two tiers of a professional women's football league and
7 within the academy structure were contacted. Five focus groups made up of football players
8 were conducted. Altogether, 27 participants (Mage = 23.96, SD = 4.49) took part. The focus
9 groups were analysed using reflexive thematic analysis from a critical realist standpoint. The
10 study identified the contextual stressors that high-performance women's football teams
11 encounter (i.e., organisational stressors arising from a newly professionalised environment
12 and on-pitch stressors arising from low social resources), effective team resilience practices
13 currently employed by group members (i.e., establishing a strong foundation for high quality
14 relationships; unity in managing pressure; and learning from setbacks to inform future
15 preparation for adversity) and the perceived gaps for team resilience development (i.e.,
16 limited effectiveness and inconsistent use of deliberate pressure training; inadequate
17 psycho-social resources; and lack of effective proactive group level strategies during
18 pressure). The study highlighted the importance of a systematic needs assessment within an
19 Intervention Mapping Framework prior to undertaking an intervention as several nuances to
20 the specific context of high-performance women's football were identified.

21 *Keywords:* needs assessment, sport psychology, sport teams, stressors, qualitative

22

23 **Lay Summary:**

24 With the intention of creating a context specific team resilience intervention, we sought the
25 opinions of women's football academies and professional teams, stakeholders, and
26 practitioners as part of a needs assessment. The study identified the specific stressors they
27 face, effective team resilience practices and some gaps for intervention development.

28

1 **Implications for Practice:**

- 2 • Due to the high turnover of staff and players in this context, a continuous emphasis
- 3 should be placed on the integration of new players to align with team values.
- 4 • Player leadership groups should be established based on empirical
- 5 evidence/guidance and team members should be given specific leadership skills
- 6 training.
- 7 • Sport psychology practitioners and coaches need to have greater collaboration
- 8 amongst themselves so that workshop based off-pitch knowledge can be deepened
- 9 through on-pitch simulation trainings.

1 Developing an understanding of how athletes achieve and sustain high levels of
2 performance over time despite the pressures of high-performance sport has been addressed
3 through the study of psychological and team resilience. Regarding team resilience, in the
4 performance sport context, the most widely adopted definition is from Morgan et al. (2013)
5 who defined the construct as, “a dynamic, psychosocial process which protects a group of
6 individuals from the potential negative effect of stressors they collectively encounter. It
7 comprises of processes whereby team members use their individual and collective
8 resources to positively adapt when experiencing adversity.” (p. 552). More recently, other
9 theoretical conceptualisations of team resilience have been proposed, such as it being an
10 emergent state (Bowers et al., 2017) or an emergent outcome (Gucciardi et al., 2018).
11 Despite differences in conceptualisations, Hartwig et al. (2020) suggested that all the various
12 perspectives represent the construct in a complementary way (e.g., capacity, process,
13 emergent state, or emergent outcome) as they may capture aspects of the same team
14 resilience construct. Hartwig et al. (2020) proposed an integrative view and argued that the
15 various conceptualisations “are embedded in a dynamic team process cycle that includes:
16 contextual factors and team composition factors, team interactions, team emergent states,
17 and team process outcomes” (p.27).

18 Team resilience is viewed as a malleable construct that can be developed over time.
19 Indeed, team resilience research has shown that leveraging a team’s individual and
20 collective resources enhances their ability to withstand stressors (c.f.Gucciardi et al., 2018).
21 When team resilience practices are implemented, this can increase the team’s performance
22 and the wellbeing of its members (Sarkar & Page, 2022). In the area of sports psychology,
23 team resilience research has identified the resilient characteristics of elite sports teams; key
24 underlying team resilience processes; and specific cues, strategies and enablers that can
25 facilitate the development of team resilience (Morgan et al., 2013, 2015, 2019). For example,
26 resilient sport teams are characterized by the following four characteristics, (1) group
27 structure (conventions that shape group norms and roles), (2) mastery approaches (shared
28 attitudes and behaviors that promote an emphasis on team improvement), (3) social capital

1 (the existence of high quality interactions and caring relationships), and (4) collective
2 efficacy (a group's shared beliefs in its ability to perform a task) (Morgan et al., 2013). To
3 develop such a resilient team five psychosocial processes have been found including (1)
4 transformational leadership, (2) shared leadership, (3) team learning, (4) social identity, and
5 (5) positive emotions. Drawing on these findings, a team's resilience can be enhanced
6 through specific strategies. To illustrate, to develop mastery approaches, team learning
7 (Alliger et al., 2015; Chapman et al., 2022) can be promoted through away-days and after-
8 action reviews (Sarkar & Page, 2022), therefore bolstering team resilience.

9 Despite the growth in resilience research that points to the benefits of developing
10 effective interventions in sports psychology, researchers have only recently started to
11 conduct such investigations. At the individual level, Vella et al. (2021) reported positive
12 outcomes for their mental health literacy and resilience program (Ahead of the Game).
13 These outcomes included an increase in participants' resilience, depression and anxiety
14 literacy, intentions to seek help from formal sources (e.g., doctor), confidence to seek mental
15 health information, and well-being (Vella et al., 2021). In another study, individuals taking
16 part in the same program reported reduced psychological distress and improved wellbeing
17 through increased resilience scores (Schweickle et al., 2023). Kuchar et al. (2023) found that
18 their resilience intervention (RESET) also led to positive outcomes such as increases in
19 perceptions of participants' self-compassion, reduced self-criticism, and greater
20 improvements in perceived performance. Though their brief online intervention did not
21 directly increase participants' quantitative resilience scores, participants reported that it
22 helped them learn tools to foster resilience. In addition, Kuchar et al. (2023) suggested that it
23 may take longer to see quantitative increases in levels of psychological resilience reinforcing
24 the dynamic feature of this psychological process. Moreover, Sullivan et al.'s (2023)
25 resilience training program showed a growth in participants' intentions to use adaptive
26 coping strategies, with student-athletes highlighting the appropriateness, usefulness, and
27 helpfulness of the training program. Whilst the authors were not able to collect post-program
28 measures of resilience, their findings indicated that such interventions may provide student-

1 athletes with the skills to effectively withstand stressors thus impacting on their resilience.
2 Consequently, findings of these four studies suggest that resilience and protective factors
3 can be developed over time via interventions and training programs.

4 Turning to the study of team resilience interventions in sport, there remains a paucity
5 with only two short studies to draw on that used co-design approaches to development.
6 Kegelaers et al. (2021) implemented a 3-week pressure training intervention in elite level
7 female basketball consisting of a single workshop and eight on-field sessions. Whilst team
8 resilience scores did not increase, the qualitative findings from semi-structured interviews
9 showed that several psychosocial team resilience qualities were enhanced, such as stronger
10 communication channels, shared mental models, increased awareness of individual and
11 collective responses under pressure, and emerging shared player leadership (Kegelaers et
12 al., 2021). More recently, Tassi et al. (2023) applied a stressful constraints led approach to
13 developing team resilience in youth football. The intervention was developed by 10 expert
14 university professors and involved the delivery of four training sessions per week for four
15 weeks using constraints to increase the mental load and stress within their sessions. These
16 constraints included environmental and task demands, for example the coach taking away
17 possession or removing a player. Through their quasi-experimental study, they found that
18 the intervention increased participants' psychological skills whilst not impairing their
19 resilience. Intriguingly, both studies adopted a pressure training/stressful constraints
20 approach within a brief timeframe. When considering the findings of existing empirical
21 studies of resilience interventions, it suggests that short interventions may not adequately
22 capture increases in team resilience which involve shared experiences of stressors over
23 time. Furthermore, longitudinal interventions during the course of a whole season or cycles
24 of seasons might be necessary. In addition, Kegelaers et al. (2021) and Decroos et al.
25 (2017) suggested that the first sign in improving team resilience might be the reduction in
26 vulnerabilities (e.g., breakdown in communication under pressure) prior to measuring
27 increases in the characteristics of team resilience. Thus, it is possible that the questionnaire
28 used in both studies (Characteristics of Resilience in Sports Teams Inventory; Decroos et

1 al., 2017) is not sufficiently sensitive to detect changes within very brief timeframes. Lastly,
2 Tassi et al. (2023) and Kegelaers et al. (2021) both concentrated on just one area of team
3 resilience development and further focus on other psychosocial characteristics such as
4 social capital may provide greater insights into team resilience interventions. Consequently,
5 to observe greater results, longer term interventions that target other relational and
6 psychosocial aspects of the team resilience construct (e.g., social capital) may be needed.

7 The limited evidence of team resilience intervention research in performance sport
8 points us to widen our scope to other domains. Specifically, since Morgan et al.'s (2013)
9 research, there has been notable interest in the construct of team resilience across diverse
10 performance contexts including information technology (Sharma & Sharma, 2016),
11 occupational and organizational settings (Hartwig et al., 2020; Raetze et al., 2021) and the
12 military (Chapman et al., 2021). In the context of military, Chapman et al. (2022) co-
13 developed their 'STOP then Resource' contextualised team resilience reflection tool with
14 military personnel and conducted a pilot study to assess its feasibility and applicability to the
15 context. The pilot intervention consisted of the completion of a reflection worksheet twice
16 within an 18 hour overnight military training activity that comprised of seven unique
17 performance stands. The questions in the worksheet related to five specific areas: a)
18 stressor event, b) timing of event, c) overview of event, d) perceived impact, and e)
19 resources (Chapman et al., 2022). In healthcare, Dubois et al. (2020) co-constructed their
20 longitudinal team resilience intervention for health workers with relevant stakeholders. They
21 proposed activities to build on the team's the ability to (a) monitor and anticipate hazardous
22 situations and to prepare for them; (b) respond to difficult, stressful situations when they
23 arise; and (b) learn from difficult, stressful situations. For their empirical research, they
24 planned a 24 month long longitudinal multiple case study approach, including a follow up
25 period after 12 months. Whilst Chapman et al. (2022) and Dubois et al. (2020) are yet to
26 conduct their empirical investigations, both used a comprehensive co-development of their
27 resilience intervention rather than imposing a universally accepted program. Due to the
28 psychosocial mechanisms and processes underlying team resilience, interventions that

1 harness team member and stakeholder input present an appropriate platform for
2 researchers.

3 Developing effective designs and capturing relevant features of psychological
4 interventions is critical to advance conceptual and theoretical research. To guide
5 researchers, a framework employing a co-design approach that underscores contextual
6 relevance is Intervention Mapping (IM; Bartholomew et al., 1998). IM is an evidence-based
7 and theory-informed step-by-step process for intervention development. Although primarily
8 used in healthcare, researchers have recently begun to apply it to sport settings (see Mattie
9 et al., 2020). Ensuring that the program addresses issues that are relevant to the target
10 population, researchers are required to co-develop their intervention through a bottom-up
11 approach (Teufel-Shone et al., 2006). In the present study, conducting a needs-assessment
12 of team resilience provided a valuable insight into the context of high-performance women's
13 football. Furthermore, the role of this guiding framework has significant potential for team
14 resilience researchers.

15 Since team resilience intervention effectiveness relies on an assessment of the
16 specific context in which stressors occur, it is critical to adopt an evidence-based pre-
17 intervention exploration to inform its design. Therefore, the purpose of the present study is to
18 conduct a pre-intervention needs assessment for team resilience development within the
19 context of women's high-performance soccer. For a study of team resilience, the context
20 was chosen based on the following two considerations. First, the findings of Brown and
21 Fletcher's (2017) meta-analysis revealed that "existing interventions have been developed,
22 tested, and refined on male athletes more readily than on female athletes [...] resulting in the
23 development of interventions that are effective for males, but not necessary females" (p.94).
24 This gap offers an opportunity to explore team resilience intervention development within a
25 sample of high-performance women's teams. Second, women's high-performance soccer
26 has gone through an immense amount of development, causing significant challenges for
27 players and staff members. Examples of such challenges include the incompatibility of
28 motherhood and maternity in professional football with current policies (Culvin & Bowes,

1 2021), high expectations of professionalism whilst experiencing inadequate working
2 conditions combined with uncertainty in a precarious workplace (Culvin, 2021) and a
3 heightened risk and prevalence of injuries (Crossley et al., 2020). The complications of such
4 a transition in high-performance female sport provide a distinctive rationale for the
5 exploration of the ways teams process and overcome adversities. Specifically, the study will
6 investigate the types of stressors within women's high-performance football; identify existing
7 effective practices employed by teams to withstand stressors; and distinguish perceived
8 gaps for effective team resilience intervention design. It is hoped that the findings will
9 contribute to the development of a longitudinal, context-specific team resilience intervention
10 and that the knowledge gained from this work will benefit researchers and key end-users
11 (e.g., sport psychologists) alike.

12 **Method**

13 **Research Design and Underpinning Philosophical Assumptions**

14 To gain a deep contextual understanding of team resilience, the study was informed
15 by a critical realist perspective (Bhaskar, 1975). Critical realism is based on ontological
16 realism meaning that "there is a state of the matter which is what it is, regardless of how we
17 do view it, choose to view it or are somehow manipulated into viewing it" (Archer, 2007,
18 p.195). However, this reality is complex and multi layered, whereby the observable events
19 are mediated by the unobservable. In addition, individuals' experiences of such events may
20 be interpreted differently (epistemological subjectivism), are socially constructed and context
21 dependent. Thus, qualitative data was chosen as the most appropriate method of capturing
22 their experiences. Applying this view, the study can illuminate the sociocultural context in
23 which team resilience occurs, important to the study of resilience in psychology (Ungar,
24 2003). Critical realism advocates for methodological pluralism (Ryba et al., 2020; Wiltshire,
25 2018) hence the present study used a triangulation of methods (literature review, focus
26 groups and expert steering groups) to achieve the research objectives.

27 In accordance with effective intervention development in psychology (van Agteren et
28 al., 2021), the study was guided by IM principles and features. Specifically, drawing on IM,

1 key aspects in this study involved conducting a needs assessment; establishing a steering
2 group; and describing the context of the intervention (Bartholomew al., 2016). The needs
3 assessment included a topical review of the literature on resilience interventions in high-
4 performance contexts to inform the interview guide and focus group discussions with the
5 target population. To triangulate these findings, a steering group was established. The group
6 (n = 6) consisted of industry experts such as a representative from the sport's National
7 Governing Body (NGB), sport psychology researchers and sport psychology practitioners
8 operating in the context of the studied sample.

9 **Sampling and Participants**

10 For a study of team resilience, participants were purposively sampled to enhance the
11 understanding of the specific context in which pressure occurs (Sparkes & Smith, 2014)
12 based on two main considerations highlighted in the introduction. Following scoping
13 meetings (e.g., to better understand the types of challenges in the sport; to explore the
14 benefits of a team resilience intervention for talent development) with senior personnel of the
15 sport's NGB, it was decided that sampling teams across a national league system would
16 offer a unique insight for a pre-intervention study. Braun and Clarke (2021b) suggested that
17 dataset size can be calculated using information power, a concept developed by Malterud et
18 al. (2016). This requires the researcher to reflect on their data to determine whether the
19 sample holds adequate information to develop new knowledge for the aim of the study (Sim
20 et al., 2018). As the study involved the examination of a specific context, smaller numbers of
21 highly knowledgeable and experienced participants within this setting were judged sufficient
22 to produce high levels of information power (Malterud et al., 2016).

23 Therefore, the final sample consisted of five teams; four competing in the top two
24 national tiers from which three teams were professional with full-time contracts, one was
25 semi-professional with part-time contract, and one academy team. Overall, 27 participants
26 ($M_{age} = 23.96$, $SD = 4.49$) who had been members of their respective teams for an average
27 of 2 years (5 months – 7 years) took part. Eleven either had played at international level or
28 were currently representing their country demonstrating substantial experience at the elite

1 level. The teams' major achievements included winning the league, promotion, becoming
2 professional, and achieving 2nd and 5th place in their respective leagues. The focus groups
3 included a diverse range of player positions including goalkeepers, strikers, captains, vice-
4 captains, and defenders.

5 **Procedure**

6 Following institutional ethical approval, further discussions and online meetings took
7 place with senior personnel from the NGB to gain greater understanding of the broader
8 national performance context, and the research project. All teams in the top two tiers were
9 invited to participate through the NGB's weekly online bulletin where details of the research
10 project were disseminated. The invitation included a 5-minute video presentation outlining
11 the requirements of the study along with an invitation letter. Upon teams expressing their
12 interest to take part, a meeting was arranged with each team's senior representative to
13 discuss the requirements of the project and to arrange a suitable date/time for data
14 collection.

15 **Data Collection**

16 To conduct an extensive contextual assessment for team resilience development, in
17 depth exploration of shared experiences with stressors was essential (Pranee, 2011). A
18 number of researchers have reported on the effectiveness of focus groups to inform
19 intervention development in group contexts (see e.g., Davies et al., 2013; Mattie et al., 2020;
20 McEachan et al., 2008). In the present study, focus groups were employed to facilitate the
21 collective construction of shared meanings and knowledge (Kook et al., 2019). This also
22 enabled the researchers to become familiar with the language used by the participants, an
23 important part of successful interventions (Watzlawick et al., 1974). Smaller groups (4-6)
24 allow for greater in-depth conversations often leading to more relevant data (Krueger &
25 Casey, 2009). Accordingly, the five focus groups comprised of 5-6 participants and were
26 held face-to-face in a meeting room at each teams' training ground. Prior to data collection,
27 the research project was explained with the opportunity to ask questions before signing an
28 informed consent form.

1 A semi-structured focus group guide was developed by drawing on the findings of the
2 literature review conducted as part of the needs assessment. Specifically, the literature
3 review revealed that teams face distinct, contextual stressors that should be identified to
4 assess and develop team resilience (cf. Chapman et al., 2021). For example, teams can
5 encounter acute or chronic adversity (Alliger et al., 2015), which may or may not be
6 uniformly experienced by every team member, but could be transmitted among them
7 (Chapman et al., 2021). Furthermore, the literature review assessment showed that teams
8 utilize behaviours and processes to prepare for, manage, and learn from stressors
9 (Gucciardi et al., 2018; Hartwig et al., 2020; Morgan et al., 2015). For example, team
10 members can leverage each other's resources and effective leadership behaviours and
11 conduct comprehensive debriefings following significant stressors. The literature review also
12 confirmed that the development of these behaviours and processes is vital when designing
13 effective team resilience interventions (Dubois et al., 2020). Subsequently, the focus groups
14 interview guide was developed iteratively through five consecutive meetings (each lasting
15 approximately an hour) with critical friends experienced in team resilience research, who
16 encouraged continuous reflection. Finally, the interview guide design comprised three
17 sections: the context of adversity; behaviours regarding preparing, managing and learning
18 from stressors; and effective interventions (see supplementary materials). To assess the
19 efficacy of the interview guide, a pilot interview was conducted with a semi-professional
20 football team playing in the women's National League (tier 4) prior to data collection. This
21 focus group gave the first author an opportunity to assess the way in which the target group
22 perceived the questions, leading to the refinement of some questions and interview structure
23 (Breen, 2006). The focus groups ranged in duration from 35 to 60 minutes ($M = 53$, $SD =$
24 10).

25 **Data Analysis**

26 Audio recordings of the focus groups were transcribed verbatim, yielding 126 pages
27 of single-spaced text. A six-phase reflexive thematic analysis (TA, Braun & Clarke, 2022)

1 from a critical realist standpoint was undertaken to analyse the dataset. Most prominent for
2 reflexive TA (Braun & Clarke, 2022), analysis through critical realism provides access to
3 participants' perception of their reality shaped by their language and cultural context (Willig,
4 2013). For example, being "under the cosh" signified high pressure situations that a team
5 collectively encountered. Following the transcribing of the interviews (Smith & Sparkes,
6 2016), the printed transcripts were read and re-read. Coding took place manually using
7 highlighters and pens, moving back and forth between the data (Trainor & Bundon, 2021).
8 After the first round of coding, the dataset included 239 codes; once duplicates were
9 removed, the coding process was completed with 158 codes (e.g., replicating games in
10 trainings). Initial themes were generated by first typing up the codes along with their
11 matching data extract to create a "master list of codes" (Trainor & Bundon, 2021, p.12) then
12 moving them into clusters to represent themes. The researcher shifted to an electronic
13 organisation of data, a separate document was created with the final themes (e.g.,
14 organisational stressors arising from a newly professionalised environment), subthemes
15 (e.g., frequent changes to personnel), and matching data extracts to review, define and
16 name the themes. The analysis continued through the write up as the authors engaged in
17 continuous reflection using inductive and deductive reasoning considering the topical review
18 of the literature.

19 **Methodological Rigor and Integrity**

20 Throughout the development of the interview guide and the analysis of the data, rigor
21 and quality were enhanced via 'critical friends', whereby the lead researcher shared, and
22 received feedback on their interpretations with four collaborators, all of whom had conducted
23 research on team resilience (cf. Smith & McGannon, 2018). A critical friend's role is to
24 provide an alternate approach of thought, encourage critical reflection of ideas, and
25 challenge one's construction of knowledge concerning the data, how it is being analysed,
26 and the conclusions that come from it (Smith & McGannon, 2018). From a critical realist
27 standpoint, the aim was to provide a compelling interpretation of the data (Braun & Clarke,
28 2021a, 2022). In addition to the use of critical friends, the steering group of expert

1 practitioners met to consider the interpretation of the initial findings (Levitt et al., 2017).
2 Within IM, the role of the steering group is to generate ideas, make decisions and choose
3 goals from the most accessible information and experience of the members (Bartholomew
4 Eldridge et al., 2016). Thus, themes were introduced to the steering group and an in-depth
5 discussion was facilitated by the moderator (the first author). This allowed for “various
6 conceptions and understandings of reality” (Natow, 2020, p.163) to be shared amongst the
7 group. Employing such approaches can strengthen methodological rigor (Cohen et al., 2000)
8 by using multiple methodological practices and triangulation can help explain complex
9 human behavior (Noble & Heale, 2019).

10 **Results**

11 The results portray the researchers’ interpretations of the participants’ experiences of
12 contextual stressors they collectively encounter, existing team resilience practices, and team
13 members’ perceptions of gaps for team resilience intervention development (see Table 1).
14 Participants’ responses are presented as a combination of data extracts (direct quotations)
15 and analytic narrative (interpretation of the data and their meaning) (Braun & Clarke, 2022).

16 **Contextual Stressors**

17 Through thematic analysis, 24 codes were identified in relation to contextual
18 stressors faced by teams. These codes were arranged into six lower-order themes
19 comprising two higher-order themes: organisational stressors arising from a newly
20 professionalised environment and on-pitch stressors arising from low social resources.

21 ***Organisational Stressors Arising From a Newly Professionalised Environment***

22 These stressors relate to challenges that participants identified to be resulting from
23 the environments that they operate in. These include: adapting to a full-time professional
24 environment; insufficient resources; and frequent changes to personnel. Participants
25 frequently expressed that the transition to full-time environments was a persistent and
26 significant challenge. For instance, team members reported that the interpersonal dynamics
27 between staff and players were often complex because some players had experienced a
28 professional full-time environment in previous clubs (in tier 1), whereas some coaching staff

1 had not (in tier 2). This unusual combination of mixed high-performance experiences within
2 teams meant that the transition to full-time environments represented a “big leap” and that
3 the relative inexperience of coaches in a newly professionalized sport created significant
4 additional pressures, illustrated by one team member: “you kind of had to step up a little bit
5 more to almost help the staff a bit”.

6 In addition, there was a heightened expectation for the players to behave
7 professionally, yet the conditions that were required for thriving were not adequate. For
8 example, players noted that “we've had sessions where we've had to cut it out [the training
9 session] because they've turned the lights off on us” or “we've had sessions where we've
10 been chucked on the grass and the grass was waterlogged and frozen on top”. Teams
11 reported that professional female players received differential treatment than their
12 professional male counterparts based on their sex. These experiences were described as
13 deeply rooted within players' development and progression during many years, and there
14 was strong frustration about professionalisation not leading to positive change as illustrated
15 by one team member:

16 Because we're women playing football, we have to deal with the tiny little crumbs that
17 we get given. Facilities, opportunities, availability [of resources], we just deal with it,
18 because we've all played football most of our lives, we're just used to it. We are used
19 to getting the breadcrumbs, used to getting the bare minimum, so we just get on with
20 it.

21 Team members reflected on the persistent challenge of starting each new season
22 with a high turnover of players. To demonstrate, one team member stated that “there are
23 only five players that were at this team last year”. They further noted that, “players [typically]
24 come and go in this league”, making it particularly challenging to develop a passion for “the
25 badge”. Frequent changes to the coaching staff were also underscored by participants as
26 having a significant negative effect on the whole team. One of the participating teams
27 described the process of a mid-season managerial change as being akin to “grief”, where
28 the environment is “never going to be the same again”. Team members reflected on

1 consequential challenge of having to perform despite going through substantial adversity.

2 ***On-Pitch Stressors Arising From Low Social Resources***

3 In the context of women's high-performance football, the present study's findings
4 identified that teams face on-pitch stressors that can affect their team performance. These
5 include: sub-optimal collective problem-solving during pressurised situations, poor team-
6 level management of collective emotions during setbacks; significant loss/es. During
7 pressure, teams commented that they struggled to deal with the opposition's tactical,
8 technical, and mental strategies. For example, one team member reported that their
9 opponents were "kicking us, getting in our faces, and we didn't know really how to deal with
10 it". Another team member spoke about not being able to adapt in the moment, or to the
11 changes in game strategies employed by an opponent and stated that "we struggle in the
12 moment to adapt and find a solution".

13 Participants described the challenges arising from poor management of collective
14 emotions. For instance, one team member commented that they often "lost sight of their
15 team's objective", and that frequently planned strategies "go out the window" because the
16 emotions are so high which adversely impacted on their performance. Participants referred
17 to moments of adversity and pressure such as losing a key player to injury during a game,
18 which in turn heightened negative emotions across the team. A failure to effectively manage
19 collective emotions during such incidents was regarded as a specific stressor during
20 competition.

21 Another team member noted the particular challenge of handling a significant loss,
22 especially getting a disappointing result to a team based faraway "it's a very long way to
23 travel to lose". They described how frustration built up significantly following certain losses,
24 with team members getting increasingly annoyed with each other affecting team morale
25 which lingered until the team's next win. Participants also discussed the impact of a
26 performance slump such as "losing four games in a row", and how they feared relegation.
27 This was illustrated by one team member who described the specific fear of relegation:

28 I think the sort of pressure of us being at the bottom, or near the bottom of the table

1 [affect us] as we know that every game that we play, we must try and get something
2 out of it ... So obviously playing in the [league] has that sort of pressure and
3 obviously if you're not performing and you're creeping down [the table] the
4 punishment is getting relegated.

5 **Effective Team Resilience Practices**

6 The focus group interviews yielded 40 codes regarding existing effective team
7 resilience practices utilised by teams in their performance environment. These codes were
8 grouped into eight lower-order themes, making up three higher-order themes: establishing a
9 strong foundation for high quality relationships; unity in managing pressure; and learning
10 from setbacks to inform future preparation for adversity.

11 ***Establishing a Strong Foundation for High Quality Relationships***

12 To effectively withstand pressurised scenarios, team members reflected on the
13 importance of establishing high-quality relationship. More specifically the strategies used to
14 achieve it included informal relationship building; and formal team building tasks.
15 Participants stated that to manage stressors effectively it was important to get to know and
16 understand each other in a variety of different contexts and situations. One team member
17 stated that strong foundations for high quality relationships were partly about “getting to
18 know people and their backgrounds and learning about where they’ve come from”. This
19 helped develop an emotional connection amongst team members by appreciating each
20 other’s journeys in life. Participants noted that developing high quality relationships were
21 harnessed on the pitch during moments of pressure. They also emphasised that there
22 needed to be mutual agreement to continuously build on the foundation for quality
23 relationships.

24 Team resilience practices also included formal team building activities during pre-
25 season, away days, or by dedicating sperate time each week. Typical activities in pre-
26 season or away-days varied from going on a “high ropes course”, to “singing”, all bringing
27 out different sides of individual players’ personalities which became important for collective
28 functioning during pressure. The weekly dedicated practices included using “coffee

1 mornings” and “fun Fridays” to create time where team members engage in non-football
2 related activities such as puzzles. Participants reported that these activities helped develop
3 effective communication styles and enhanced the collective mood, which transferred to their
4 training sessions or their game performances as one team member reported below:

5 I feel like a lot of what we focus on is the off the pitch stuff [relationship building] that
6 helps then how we discuss stuff on the pitch. We're trying to learn how to get the best
7 out of each other [under pressure] in the way that we communicate ... we've been
8 doing a lot so that we get better at trying to talk on the pitch to get the best out of
9 people.

10 ***Unity in Managing Pressure***

11 Team members identified the importance of behaviours and attitudes relating to team
12 unity to effectively manage pressurised scenarios. Examples of effective practices included:
13 teammates emotional support during adversity; understanding teammates' individual
14 responses to stressors; and collective drive to perform. Participants particularly emphasised
15 the role of providing emotional support to each other during stressors both on and off the
16 field. For instance, following a period of significant managerial change, one player noted
17 that, “I think the only person or people that we had to really look to in those moments were
18 each other”. Unity in managing pressure was also created by forming an understanding of
19 others' personal lives outside soccer. For instance, when a teammate was going through
20 hardship outside of the pitch, teammates came together to provide emotional support as
21 reported by one of the participants: “you just need to take care of that one a bit more and not
22 leave them like dwelling on whatever the problem is”. During on-pitch challenges, emotional
23 support manifested itself through for instance “eye contact” to reassure teammates because
24 “some team members just needed to know that it's all right”.

25 In addition to emotional support, there was a general recognition from all teams that
26 each player is a unique individual, and that each of them will react differently to pressurised
27 moments. Participants noted that team members needed to develop an understanding of
28 what type of support each person needs so that such knowledge can be utilized, and

1 appropriate support can be provided to their teammates when faced with an on-pitch
2 stressor:

3 In a game there's like certain people that will need certain types of people, some
4 people might need somebody that's gonna tell them how it is, some might need a
5 motivator they might just need a few words of encouragement to get them going
6 again. The little things that if you know your teammates around you, you're gonna
7 know how to help them.

8 During on and off field adversity, participants noted that they "stuck together" to
9 overcome the challenges they were facing, demonstrating a collective drive to perform.

10 Participants also commented that a sense of unity to withstand stressors was created by the
11 whole team performing well together and by having a collective belief. One player explained
12 this and commented that "I think everyone that day had the belief that we could do it" by
13 working hard, and where "everyone put the extra yard in".

14 ***Learning From Setbacks to Inform Future Preparation for Adversity***

15 The findings of the present study also showed that effective team resilience practices
16 were related to ongoing processes based on learning from setbacks. Three lower-order
17 themes illuminated this theme: staff-led analysis identifying strengths and weaknesses;
18 tactical preparation on and off the field; and communication. Team members reported that
19 the use of review meetings led by members of the coaching staff were helpful to prepare for
20 any foreseeable challenges by analysing stressors that they collectively encountered.

21 Participants commented that they felt 'safe' in these meetings, and that this supportive
22 environment created an individual and collective learning opportunity to effectively manage
23 stressors in the future illustrated by one team member:

24 Well, every game is filmed. So, coaches help you to go through it yourself and get
25 different clips [of difficult situations]. And then they show us back and tell us what we
26 should have done or what we've done well. So, we can learn from the mistakes and
27 then see what we are doing well so we can carry on doing that. Because it's not just
28 like them telling us what we did wrong, we can see it, so it just helps us to get the

1 pictures of what we need to be doing in our head.

2 Tactical preparation on the pitch included working on collective responses to
3 stressors. Participants discussed the importance of having a supportive environment out on
4 the pitch too “where everyone feels like they have the power and confidence to speak up
5 and change something”. Team members described that these sessions increased players’
6 understandings of ‘what-if’ scenarios which promoted deeper learning about pressurised
7 situations.

8 Learning from setbacks was also emphasised via communication amongst team
9 members. Participants discussed the importance of frequent communication as a way of
10 managing stressors and all teams stated that “communication is such a big thing as . . . it’s
11 probably the main way we get through patches” and talking it out.

12 **Perceived Gaps in Team Resilience Development**

13 The present study sought to identify the discrepancy between ‘what is’ (i.e., team
14 resilience strategies currently implemented) and ‘what could/should be’ (i.e., evidence-based
15 practices found in the literature). The thematic analysis identified 59 codes in relation to
16 perceived gaps in team resilience development in high performance women’s soccer. Codes
17 were clustered into 10 lower-order themes, making up three higher-order themes: limited
18 effectiveness and inconsistent use of deliberate pressure training; inadequate psychosocial
19 resources; and lack of effective proactive group level strategies during pressure.

20 ***Limited Effectiveness and Inconsistent use of Deliberate Pressure Training***

21 Team members reported inconsistent behaviours and attitude shifts towards their
22 preparation and their team resilience practices. These included: complacency towards
23 preparation when in positive momentum; effective team responses developed off-pitch lack
24 transferability; and need for team resilience training to become part of the natural cycle.
25 Participants explained that there were often attitude shifts and growing complacency in the
26 consistency of their training for stressors when the team gained momentum. Teams often
27 tended to take the opposition “for granted” and frequently the focus was only on preparing to
28 win, as opposed to preparing for “foreseeable challenges”. Players identified that there was

1 an opportunity to develop team resilience on pitch for example by replicating games that
2 included adverse situations to develop team knowledge around 'what works when'. One
3 team member illustrated how this current gap might be approached:

4 We could play the same minutes as for this game that we played, for example, it's 70
5 minutes, and we're two-nil down, you've got 20 minutes to go and get two goals to
6 save the game. What are you going to do as a team to sort of encourage
7 conversation, how you'd set up [tactically], and what we want from the coaching staff.
8 Express yourself with no fear as well. Obviously, situation and scenario based, even
9 losing a player you can sort of mirror those situations in training.

10 Whilst only three out of the five teams had access to a sport psychologist, those who
11 did reflected on the need for coaches and sport psychologists to work more closely. Team
12 members discussed that there was often a lack of transferability between what they had
13 done in (sport psychology) workshops to the actual performance environment. In addition,
14 participants highlighted that not everyone learns the same way, some might benefit more
15 from 'classroom based' exercises whereas others more from practical tasks on pitch, thus
16 calling for a blended team resilience training program.

17 Team members also identified that developing their team's resilience should become
18 part of a natural, continuous cycle of training and performance. For example, using it as a
19 focus point during one of the training sessions in the week where they deliberately practice
20 pressurized scenarios. According to the participants, if they included such practices in their
21 weekly schedules, then it could result in a more natural collective response during on-pitch
22 adversities since everyone would be aware of the strategies to withstand the pressure.

23 ***Inadequate Psychosocial Resources***

24 Team members described the desire for additional resources and the potential
25 benefits of the identified psychosocial support types. These included: the call for confidential
26 support to process setbacks; and for individual 1-2-1 support to develop psychological skills.
27 Participants expressed the need for someone separate from the coaching staff to provide
28 appropriate support when experiencing significant adversity. For example, team members

1 identified weekly confidential team meetings as a new opportunity, to create space for
2 sharing to process setbacks more adequately. Participants also recognised that whilst they
3 would not want coaches to be in these discussions, there should be a shared agreement
4 between team members on certain points to be fed back to the coaches. Furthermore,
5 participants suggested that breaking into smaller groups might result in better quality
6 discussions when reviewing difficult situations and stressors. The concern about not having
7 a sports psychologist involved in team resilience training was highlighted by one team
8 member below:

9 I think if it's not a psychologist [to discuss difficult situations], it would probably make
10 it more difficult to have a different staff member in there because I think people are
11 much less likely to be honest if there is a member of staff having these discussions.
12 And let's say, I wanted to be really open with player x, I wouldn't feel like I would be
13 digging them out. And I would never want to do that to a player. So I wouldn't ever
14 want staff in there I think, just a psychologist.

15 Participants also noted the need for further personal one-to-one support to develop
16 effective psychological skills to withstand stressors "so it's like having the right tools or the
17 right mindset that works for you". Team members commented that "you gotta be able to try
18 and sort your own emotions out first" as that would allow the players to better support the
19 wider team during pressurised moments. In addition, participants suggested that group-
20 based workshops must also consider individual differences "rather than thinking of us as a
21 whole".

22 ***Lack of Effective Proactive Group Level Strategies During Pressure***

23 Participants identified a variety of existing ineffective practices during pressure that
24 could be enhanced including the absence of knowledge around emotional contagion;
25 improving knowledge exchange during a game; developing regrouping practices for on pitch
26 challenges; and strengthening player leadership skills. Regarding emotional contagion,
27 players acknowledged the potential for reciprocal transmission of both positive and negative
28 emotions. Team members specifically highlighted the potential for encouragement,

1 leadership, and confidence to generate a positive "domino effect" that facilitates optimal
2 individual emotional states during pressure. However, they also noted that a similar effect
3 could be observed for "panic", "worry", and "anxiety", which on multiple occasions influenced
4 the team's performance negatively. This was not only the case between players themselves
5 but also between staff and players as two of the participating teams explained:

6 (1) Whatever energy they [the coaches] are giving off, we sort of replicate it on the
7 pitch. So, if they're just being really quiet and not really saying anything, we're a
8 bit slower and more unfocused, I think.

9 (2) "Some of the staff go silent, but sometimes it's the complete opposite. And they
10 panic, and then that injects onto us, and we are panicking when actually we just
11 need to relax, calm down and regroup."

12 Participants highlighted that during moments of pressure they also need to ensure
13 that knowledge transfer takes place by having clear lines of communication (e.g., "one
14 person leading it") to make better tactical decisions. One team member noted that "say, all
15 the staff and maybe like some players recognise it [what needs to happen], they tell that one
16 person, to communicate to everyone".

17 Team members recognised that it was important as a collective to regroup and reset
18 following on-pitch challenges (e.g., conceding a goal) where "we need to be able to like
19 pause, reset, like, regroup, and then face it [the stressor]". Where there was not a natural
20 pause in play, resets were created by the goalkeeper going down to stop the play. Team
21 members noted that when they did, on occasion, employ such a "reset", they were able to
22 think logically, made better decisions and worked together as a group more effectively in
23 high-pressure performances. Therefore, having such a strategy in place where the team can
24 get together and regroup was regarded vital by the participants in overcoming stressors.

25 Teams highlighted the benefits of their existing leadership group to the general team
26 environment; however, a notable gap was recognised in its application during stressors by
27 the respective leaders originating from the absence of selection criteria and lack of training.
28 One team member commented that "I was made vice-captain mainly just because I've been

1 at the club for a long time” and not due to their leadership skills. Another younger leader
2 noted that “I sometimes struggle to feel that I can call people out or like tell people off who
3 are more experienced and older than me”, indicating the need for leadership skills training.

4 **Discussion**

5 The aim of the study was to conduct a contextual needs assessment for team
6 resilience development within the context of high-performance women’s football. Using IM
7 as a guiding framework, this systematic needs assessment identified the contextual
8 stressors high performance women’s football teams encounter (i.e., organisational stressors
9 arising from a newly professionalised environment and on-pitch stressors arising from low
10 social resources), effective team resilience practices currently employed by group members
11 (i.e., establishing a strong foundation for high quality relationships; unity in managing
12 pressure; and learning from setbacks to inform future preparation for adversity) and the
13 perceived gaps for team resilience development (i.e., limited effectiveness and inconsistent
14 use of deliberate pressure training; inadequate psycho-social resources; lack of effective
15 proactive group level strategies during pressure).

16 The literature review assessment identified that a context-specific exploration of
17 stressors was an essential first step for a pre-intervention study to address the critical
18 question of ‘resilience to what’ (Chapman et al., 2021). The contextual stressors
19 (organisational stressors arising from a newly professionalised environment and on-pitch
20 stressors arising from low social resources) faced by the sample teams revealed many
21 nuances specific to the newly professionalised sport of women’s football. For instance, our
22 findings demonstrated that participants found the high turnover of team members particularly
23 challenging as they often struggled to integrate new members and develop a distinctive
24 team identity. The importance of social structures has previously been highlighted by team
25 resilience researchers (Fasey et al., 2021; Gucciardi et al., 2018; Hartwig et al., 2020;
26 Morgan et al., 2013); however, in this context, our findings show the specific need for such
27 structures to be emphasized *repeatedly* during a season.

28 The findings of the present study provide a unique insight into the context specific

1 team resilience practices utilised in high performance women's soccer, namely: establishing
2 a strong foundation for high quality relationships; unity in managing pressure; and learning
3 from setbacks to inform future preparation for adversity. The importance of developing high
4 quality relationships and providing support to each other was evident in the ways teams
5 prepared for and managed stressors. This might be explained by the sex differences found
6 in friendships as women prioritized emotional support (Williams et al., 2022), and sex
7 differences found in relation to empathy, as the female brain showed stronger empathic
8 response at the sight of the others' pain (Proverbio, 2023). Thus, when a player experiences
9 a sudden injury during a match, team members might need to draw on a wide range of
10 resources to keep up the team's performance.

11 The findings demonstrate that learning is vital in overcoming setbacks within the
12 context of women's football. However, this study highlighted the specific role of tactical
13 debriefs and analysis as they offer ways to "see the pictures" and develop shared responses
14 to stressors. The findings of the present study can be explained by the need for teams to
15 foster an environment where debriefs are part of the culture can help reinforce shared
16 mental models. Hartwig et al. (2020) suggested that team learning facilitates more accurate
17 team mental models and increased awareness of effective and ineffective adversity
18 responses. Furthermore, the present study suggests that although learning takes place
19 within the boundaries of meetings led by coaches, there is a need for separate team
20 meetings led by a sport psychologist or other 'external' support roles to discuss setbacks.
21 This provides opportunities for feelings to be shared in a 'safe space', increasing
22 psychological safety, ultimately positively impacting on team resilience (Fransen, McEwan,
23 et al., 2020).

24 In addition to psychological support at the team-level, participants recognized that
25 they would benefit from individual psychological support to develop their own personal
26 resilience and psychological skills. The literature review revealed that the importance of
27 individual resources to team resilience has been widely recognised by team resilience
28 researchers (Gucciardi et al., 2018; Hartwig et al., 2020; Morgan et al., 2013). Though a

1 team of 'resilient' individuals does not necessarily lead to a 'resilient' team (McEwen & Boyd,
2 2018; Morgan et al., 2013) team members must be able to draw on individual and collective
3 resources to withstand pressure. The present study adds to the literature by capturing a
4 specific recognition of end-users' requests for more individual support directly in relation to
5 their team's resilience. These findings reinforce the requirement for multi-level development
6 when planning team resilience interventions.

7 The results suggested that team members were acutely aware of the negative effects
8 of inadequate management of their emotions during pressurized moments and how these
9 often transferred to each other baring significant consequences to team performance. These
10 findings can be explained by the construct of emotional contagion which is defined as the
11 "process by which a person or group influences the emotions or behavior of another person
12 or group through the conscious and unconscious induction of emotion states and behavioral
13 attitudes" (Schoenewolf, 1990, p.50). Investigations in performance sport contexts supported
14 its prevalence specifically in cricket (Totterdell, 2000) and in football (Rumbold et al., 2022).
15 In addition, research shows that women might be more susceptible for emotional contagion
16 (Rochat, 2023), than men. To increase a team's ability to effectively manage stressors, team
17 members can facilitate the transfer of positive emotions among each other through athlete
18 leaders, leading to increased confidence and belief (Clarkson et al., 2017; Cotterill et al.,
19 2020; Morgan et al., 2019). For instance, during moments of pressure selected athlete
20 leaders can positively steer emotions on the pitch by encouraging, motivating, and helping
21 the team to retain a focus on their individual and shared goals. This in turn would positively
22 influence several team resilience characteristics and processes.

23 The present study also found that when teams enter a 'winning streak' or gain
24 'positive momentum', they fall behind in the consistency of preparation for stressors. This
25 could be explained by findings in the area of teamwork. For example, when teams become
26 overconfident, complacency can be experienced (Mach et al., 2022). This can ultimately
27 affect the team's performance negatively through poor communication (McEwan & Crawford,
28 2022). In this context, our findings indicate the specific gap for a team resilience intervention

1 to target *continuous* preparation for stressors. This may positively impact performance by
2 enhancing collective problem-solving skills during pressure. To successfully embed
3 continuous preparation for stressors, our study found that ‘classroom’ sport psychology
4 workshops should be contextualised to on-pitch dynamics with the collaboration of coaches.
5 Interestingly, Brown and Fletcher (2017) found, that psychosocial interventions are most
6 effective when working with and through coaches.

7 Coaches and sport psychologists might also benefit from working closely with the
8 appropriate formation of shared player leadership. More specifically, the present study found
9 that whilst team members viewed collective leadership as a key component of team
10 resilience (Kegelaers et al., 2020; Morgan et al., 2019), leaders were not selected based on
11 empirical guidance (e.g., The 5R Shared Leadership Program, Fransen, Haslam, et al.,
12 2020; Mertens et al., 2020). This oversight has resulted in players lacking the necessary
13 skills to lead their team and execute important team resilience strategies noted by
14 participants such as ‘resetting’ on pitch following pressure (e.g., conceding a goal). Though
15 several tactics were identified for resetting such as the ‘goalkeeper going down’, however,
16 players must be able to recognise the scenario (i.e., from simulation-training) and possess
17 the required leadership skills to regroup and reset. Particularly, as when athletes perceive
18 higher levels of player leadership quality within their respective teams, they also score
19 higher on team resilience (López-Gajardo et al., 2022).

20 **Strengths and Limitations**

21 A notable strength of the present study was the application of IM as an overarching
22 guiding framework. Utilizing IM approaches provided a relevant methodological underpinning
23 to achieve a rich exploration of a specific context which is necessary for team resilience
24 intervention development (cf. Chapman et al., 2020). Another significant strength of the
25 study was the novel research into women’s high-performance sport. This sample is
26 significantly underrepresented in intervention studies in the field of sport psychology which
27 resulted in the development of psychosocial interventions that are less affective for this

1 population (Brown & Fletcher, 2017). Given the rate of women's football's progression, it is
2 essential that empirical research takes place to support its development.

3 The limitations of the present study included a particular focus on players
4 perspectives. However, the role of the expert steering group also attempted to capture the
5 insights and experiences of coaches, administrators and sport psychologists operating in the
6 women's game. Notwithstanding this, gaining insights from coaches (see Kegelaers et al.,
7 2020) and support staff members from the sample of teams would have provided an even
8 richer vantage point into the perceived pre-intervention assessment needs. Another
9 limitation included one-off focus group interviews at a particular point in time. It is possible
10 that multiple discussions at different time points would have provided a deeper
11 understanding of strategies utilised at different time-points within the season.

12 **Future Research**

13 There are several research avenues that could further benefit team resilience
14 practices in sport. Firstly, participants identified that they would benefit from more
15 psychological support; thus, studies could explore the reasons as to why such support has
16 not been available and the potential barriers that exist within this context. Another key area
17 of future research is to draw on psychosocial pre-intervention assessments to form the basis
18 of a longitudinal team resilience intervention. At present, there is a significant gap with only
19 two brief empirical team resilience interventions in sport. Furthermore, when conducting
20 interventions, researchers should recognize the benefits of conducting detailed process
21 evaluations to supplement the analysis of a team resilience training program (see Randall et
22 al., 2019). Such process evaluations may capture the perspectives of participants during
23 specific stressors and help make sense of why specific team resilience contributed to
24 withstanding pressure.

25 **Applied Implications**

26 The findings provide several important practical implications for sport coaches, sport
27 psychology practitioners and those working in women's football. The study highlighted the
28 importance of an effective needs assessment prior to undertaking an intervention as several

1 nuances specific to the studied context were identified. For example, to overcome the
2 challenges resulting from the high turnover of staff and players, practitioners need to be
3 mindful of integrating new members into the team with a particular attention to team values.
4 In addition, due to the significance placed on forming relationships and the role that
5 emotional support plays in managing adversity, coaches should allow time for team building
6 activities *throughout* the season as this would also allow for the integration of new team
7 members. Appropriate pressure training should be incorporated into the players weekly
8 schedules to develop effective collective responses to stressors (see Kegelaers et al., 2021)
9 to overcome the challenges resulting from sub-optimal collective solving and poor team-level
10 management of collective emotions. Typical strategies noted in this study included
11 replicating previous games, practising regrouping, and rehearsing lines of communication
12 under pressure. However, the findings also showed that it is important that these practices
13 are maintained during periods of positive momentum. Greater collaboration between sport
14 psychology practitioners and coaches is needed to deepen off-pitch knowledge (e.g.,
15 collective responses to stressors) and to practice during simulation training (see Wylleman,
16 2019). This could be enhanced via for instance the practitioner's physical presence during
17 training sessions, and or being an active part of multidisciplinary team meetings. Lastly,
18 when utilizing leadership groups to help protect teams from the potential negative
19 consequences of stressors, practitioners should carefully select player leaders (see
20 Fransen, Haslam, et al., 2020) and there should be specific consideration for developing
21 their leadership skills.

22 The findings of the present study point to guidance for practitioners wishing to design
23 develop, and implement team resilience interventions within the context of women's high-
24 performance football. Firstly, those working with teams might adopt a co-development
25 approach (e.g., Chapman et al., 2022; Dubois et al., 2020). This could be achieved by
26 harnessing the knowledge and experiences of key stakeholders such as managers and
27 those in leadership roles (e.g., team captain) to ensure that the specific team resilience
28 content (e.g., team building activities) aligns with the team's vision, their stage of the team's

1 development, the specific environment, participants' psychosocial needs as well as their
2 training program. In turn, this could lead to greater levels of 'buy-in' (O'Cathain et al., 2019;
3 Ramage et al., 2022), which will likely increase the the effectiveness of an intervention (Ely
4 et al., 2021). The specific stressors arising from the profesionalisation of sport highlighted
5 in this study also point to the development of coach education programs or mentoring
6 schemes (Dempsey et al., 2021; Sawiuk et al., 2018). Such programs would equip coaches
7 with the knowledge and skills necessary for preparing, and managing significant challenges.
8 In addition, mentoring schemes could offer coaches another source of support in adjusting to
9 a newly professionalised environment.

10 **Conclusion**

11 To conclude, the present study explored context specific stressors, effective
12 practices, and gaps in team resilience development within high-performance women's
13 football. A contextual needs assessment was conducted within an intervention-mapping
14 framework which included an insights from an expert steering group. The findings of the
15 present study showed that high-performance women's football teams encounter a range of
16 organisational stressors arising from a newly professionalised environment and on-pitch
17 stressors arising from low social resources. In addition, several practices were identified that
18 teams currently utilize to develop their teams' resilience such as establishing a strong
19 foundation for high quality relationships; unity in managing pressure; and learning from
20 setbacks to inform future preparation for adversity. The study also identified important gaps
21 in teams' existing team resilience practices including: limited effectiveness and inconsistent
22 use of deliberate pressure training; inadequate psychosocial resources; and lack of effective
23 proactive group level strategies during pressure. In summary, the study highlighted the
24 critical need to appreciate the dynamic and complex nature of team resilience in the specific
25 context in which it occurs. This paper provides the foundation for intervention development
26 in the context of high-performance women's sport.

27

28 **Data availability statement:** The data that support the findings of this study are available on

- 1 request from the corresponding author [ASZ]. The data are not publicly available due to their
- 2 containing information that could compromise the anonymity of research participants.

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Table 1*Findings of a Team Resilience Pre-Intervention Needs Assessment*

Domain	Higher-order theme	Lower-order theme
Contextual stressors	Organisational stressors arising from a newly professionalised environment	Adapting to a full-time professional environment Insufficient resources Frequent changes to personnel
	On-pitch stressors arising from low social resources	Sub-optimal collective problem-solving during pressurised situations Poor team-level management of collective emotions during setbacks Significant loss/es
Effective team resilience practices	Establishing a strong foundation for high quality relationships Unity in managing pressure	Informal relationship building Formal team building tasks Teammates emotional support during adversity Understanding teammates individual responses to stressors Collective drive to perform
	Learning from setbacks to inform future preparation for adversity	Staff led analysis identifying strengths and weaknesses Tactical preparation on and off the field Communication
Perceived gaps in team resilience development	Limited effectiveness and inconsistent use of deliberate pressure training	Complacency towards preparation when in positive momentum Effective team responses developed off-pitch lack transferability Need for team resilience training to become part of the natural cycle
	Inadequate psycho-social resources	Confidential support for the team to process setbacks Individual 1-2-1 support to develop psychological skills
	Lack of effective proactive group level strategies during pressure	Absence of knowledge around emotional contagion Improving knowledge exchange during a game Developing regrouping practices for on pitch challenges Strengthening player leadership skill