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Defining and characterizing organizational resilience in elite sport

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1 Abstract

2 *Objectives:* Organizational resilience has been investigated in numerous performance contexts
3 outside of sport, with substantial conceptual and operational variance. Given the growing interest
4 in organizational environments in sport, the purpose of the study was to construct a definition of
5 organizational resilience and identify resilient characteristics of elite sport organizations.

6 *Design and method:* Using the Delphi method, 62 expert panelists working in or with elite sport
7 organizations ($n=45$) or having academic experience of resilience in various contexts ($n=17$),
8 responded to four online iterative surveys over seven months, yielding both quantitative and
9 qualitative data through item responses and accompanying comments. A reflexive thematic
10 analysis of the integrated data was conducted from a critical realist standpoint.

11 *Results:* Organizational resilience was defined as “the dynamic capability of an organization to
12 successfully deal with significant change. It emerges from multi-level (employee, team, and
13 organizational) interacting characteristics and processes which enable an organization to prepare
14 for, adapt to, and learn from significant change”. The five resilient characteristics identified from
15 the analysis were structural clarity, flexible improvement, shared understanding, reciprocal
16 commitment, and operational awareness.

17 *Conclusions:* By proposing a definition of organizational resilience which is appropriate to and
18 endorsed by those in elite sport organizations, and identifying resilient characteristics of elite
19 sport organizations, this study provides an important foundation for future research and practice
20 endeavors in this area.

21 *Keywords:* change, definition, Delphi method, organizational sport psychology,
22 performance, resilient characteristics

1 Defining and characterizing organizational resilience in elite sport

2 While all organizations face some degree of turbulence and unexpected events, elite sport
3 organizations often face particularly high levels of internal uncertainty and change due to
4 stakeholder demands for demonstrable and sustained success (Wagstaff et al., 2016). As noted by
5 Parent et al. (2018), state funded sport organizations in particular need to balance investment in
6 grassroots development with high-performance targets, and face stakeholder heterogeneity in
7 agendas and needs. Sport organizations have been on a ‘journey of professionalism’ from
8 volunteer-driven to commercialized organizations (Shilbury & Ferkins, 2020), with a rapid
9 change in the demands of governance practices. Beyond this, elite sport organizations frequently
10 face reputational issues such as the allegations of financial corruption at FIFA (Boudreaux et al.,
11 2016), doping within Russian sporting institutions (“Russia banned for four years”, 2019), or
12 failures to prevent abuse at USA Gymnastics (Dure, 2019).

13 How organizations deal with uncertainty and disruption depends on a range of internal
14 and external factors, with some being better equipped to respond than others. The term resilience
15 is often applied where an organization, or indeed a team or individual, demonstrates a positive
16 outcome following an unexpected or disruptive event (Britt et al., 2016; Fletcher & Sarkar, 2013;
17 Linnenluecke, 2017). Organizational resilience is an emerging concept which seeks to
18 understand and explain how and why organizations survive, adapt, and thrive in dynamic
19 environments which are uncertain and complex (Duchek, 2020; Lee et al., 2013). This concept
20 has been investigated in various contexts such as business and industry (Boin & van Eeten, 2013;
21 Gittell et al., 2006), the public sector (Dalgaard-Nielsen, 2017; Fitzgerald, 2018), and community
22 sport clubs (Wicker et al., 2013). Within the elite sport context, despite the presence of a growing
23 body of literature on individual resilience (e.g., Bryan et al., 2019; Fletcher & Sarkar, 2012) and
24 team resilience (e.g., Morgan et al., 2017), organizational resilience has yet to be explored.

25 Over the last decade or so, there has been definitional and conceptual advancement of

1 individual resilience (Fletcher & Sarkar, 2012, 2013, 2016) and team resilience (Morgan et al.,
2 2013) in the sport context. At the same time, there has been a burgeoning body of empirical
3 evidence investigating individual resilience (see, for reviews, Bryan et al., 2019; Galli &
4 Gonzalez, 2015; Sarkar & Fletcher, 2014) and team resilience in elite sport (see, for a review,
5 Morgan et al., 2017). At the group level, team resilience has been defined as “a dynamic,
6 psychosocial process which protects a group of individuals from the potential negative effect of
7 the stressors they collectively encounter. It comprises of processes whereby team members use
8 their individual and combined resources to positively adapt when experiencing adversity”
9 (Morgan et al., 2013, p. 552). Researchers in this area have identified resilient characteristics of
10 elite sport teams (group structure, mastery approaches, social capital, collective efficacy; Morgan
11 et al., 2013) and psychosocial processes underpinning team resilience in elite sport
12 (transformational leadership, shared team leadership, team learning, social identity, positive
13 emotions; Morgan et al., 2015). Morgan et al. (2019) subsequently found five psychosocial
14 enablers and strategies that promote the development of team resilience within a high-level
15 sports team, namely inspiring, motivating, and challenging team members to achieve
16 performance excellence, developing a team regulatory system based on ownership and
17 responsibility, cultivating a team identity and togetherness based on a selfless culture, exposing
18 the team to challenging training and unexpected/difficult situations, and promoting enjoyment
19 and keeping a positive outlook during stressors. Within both the individual and team resilience in
20 sport literatures, definitional inconsistencies remain (Britt et al., 2016; Morgan et al., 2017), such
21 as the types of adversity which “trigger” resilience, and the necessary or expected outcomes.

22 The hitherto lack of research attention devoted to organizational resilience in elite sport is
23 somewhat surprising given the growing acknowledgement that sport organizations are
24 characterized by highly complex social and organizational environments which exert major
25 influences on those that operate within them (see Fletcher & Wagstaff, 2009; Wagstaff, 2017).

1 Furthermore, organizational resilience has the potential not only to positively influence the
2 functioning of the sport organization itself, but also the resilience of its athletes and teams
3 (Wagstaff et al., 2020). Allied to this, there have been calls to dedicate both theoretical and
4 applied attention to understanding and influencing the cultural environments within elite sport
5 organizations (Wagstaff & Burton-Wylie, 2018), and to promote the development of optimally
6 functioning organizations (Fletcher & Wagstaff, 2009; Wagstaff, 2017). Several features of elite
7 sport make it an intuitively appealing context for organizational resilience research, including the
8 relatively short, scheduled performance periods, the objective outcome of winning or losing
9 (Shoenfelt, 2016), and that some of the stressors encountered in elite sport are “unquestionably
10 more severe” (Fogarty & Perera, 2016, p. 424) than those encountered in other work settings.
11 Specifically, the intensity of interactions within an elite sporting environment, having to fulfill
12 different roles leading to task and relationship conflict, logistical demands, external expectations
13 and cultural norms (Arnold & Fletcher, 2012; Rumbold et al., 2018) are all organizational
14 stressors commonly encountered by individuals working in elite sport.

15 In order to better understand how organizations and the employees working within them
16 deal with these stressors, it is necessary to consider how organizational resilience is
17 conceptualized in the elite sport context, as well as the range of factors which may equip some
18 organizations to respond better than others. Researchers have highlighted potential links between
19 elite sport and various other performance domains, such as military, medical, and the performing
20 arts (Molan et al., 2019). It follows that insights from organizational resilience research in other
21 performance domains are therefore likely to aid understanding and interpretation of
22 organizational resilience in elite sport.

23 Organizational resilience has variously been defined in other performance domains (for a
24 review, see Conz & Magnani, 2020; Ducheck, 2020) as “the maintenance of positive adjustment
25 under challenging conditions such that the organization emerges from those conditions

1 strengthened and more resourceful” (Vogus & Sutcliffe, 2007, p. 3418), and “the inherent and
2 adaptive qualities and capabilities that enable an organizations adaptive capacity during turbulent
3 periods” (Burnard & Bhamra, 2011, p. 5587). From these definitions, key strands are apparent
4 (Annarelli & Nonino, 2016), principally the need for some kind of unexpected or disruptive
5 resilience event, and a positive outcome following such an event. Nevertheless, there are
6 inconsistencies in how these defining features are conceptualized, for example whether the
7 adversity must be extreme or can encompass everyday stressors, and whether thriving is a
8 necessary positive outcome, or mere survival is sufficient. Such variations in the current research
9 base derive from the fragmentation and importation of organizational resilience definitions
10 across and between domains (Conz & Magnani, 2020; Tarba et al., 2017).

11 Organizational resilience researchers are also interested in the factors which contribute
12 towards an organization’s resilience capacity, allowing an organization to prepare for and
13 respond to stressors (Hamel & Valikangas, 2003), as well as identifying strengths and areas of
14 weakness (Morgan et al., 2013). Recent reviews in this area suggest that factors such as
15 organizational structure, culture, networks, and resources, as well as an organization’s adaptive
16 capacity, minimization of barriers, and employee engagement are potential characteristics of
17 organizational resilience (Barasa et al., 2018; Rahi, 2019; Wagstaff et al., 2020).

18 Given the diverse range of organizations covered by the existing research base, and the
19 need to give due consideration to contextual factors which may impact the applicability of extant
20 findings to a novel domain such as elite sport (Suddaby, 2010), it is necessary to employ a
21 research methodology which is conducted in close collaboration with end-users to foster
22 usability and alignment to their needs. The Delphi method is a structured communication
23 technique designed to transform expert opinion into group consensus through a series of survey
24 rounds (Hasson & Keeney, 2011), and has been used in research on wellbeing in sport (Daykin et
25 al., 2017), European resilience guidelines (Adini et al., 2017), and Paralympic athlete

1 classification (Ravensbergen et al., 2016). Selecting experts working in or with elite sport
2 organizations alongside organizational resilience, or resilience in sport academics, the purpose of
3 the study was to construct a definition of organizational resilience and to identify the resilient
4 characteristics of elite sport organizations based on prior literature and expert opinion, providing
5 an important stepping stone in the conceptual building process. The research objectives were
6 twofold: 1) to understand the extent to which experts agree on the different features of existing
7 definitions of organizational resilience; and 2) to identify which characteristics experts perceive
8 as most important for organizational resilience in elite sport.

9 **Method**

10 **Research Design**

11 The research was informed by a critical realist perspective (Ronkainen & Wiltshire,
12 2019), underpinned by ontological realism (i.e., reality exists independently of our knowledge of
13 it) and epistemological interpretivism (i.e., the production of knowledge is a social practice).
14 Specifically, while social-psychological phenomena are regarded as multifaceted and complex,
15 “there is a state of the matter which is what it is, regardless of how we do view it, choose to view
16 it or are somehow manipulated into viewing it” (Archer, 2007, p. 195). This ontological
17 perspective is congruent with the aim of constructing a definition of organizational resilience and
18 identifying resilient characteristics of elite sport organizations. In adopting an epistemological
19 interpretivist approach to this study, we recognize that knowledge is the product of
20 intersubjective relations between individuals. Attempting to “align explanations of reality with
21 reality itself” (Williams, 2018, p. 30), using the Delphi method within this study allowed us to
22 explore multiple perspectives of organizational resilience while trying to align those multiple
23 perspectives within an agreed co-produced definition and resilient characteristics. With an
24 emphasis on methodological pluralism a distinguishing feature of critical realism (Ryba et al., in
25 press), a mixed methods convergent design (Fetters et al., 2013) was used. Quantitative and

1 qualitative data were collected concurrently through forced response items and unforced open
2 responses via four online iterative surveys over a period of seven months.

3 **Participants**

4 To qualify as an “expert”, participants had to be able to provide insight into the
5 functioning of elite sport organizations (through working in or with such organizations) or have
6 academic expertise in organizational resilience or resilience in sport (determined through
7 relevant peer-reviewed publications). In the absence of an existing definition of an “elite sport
8 organization”, it was operationalized as a governing body for an Olympic or Paralympic sport, or
9 the organizational body employing a national or professional athlete or team, for example a
10 professional or national football club (cf. Swann et al., 2015; Grey-Thompson, 2017).

11 Of the 167 individuals invited to participate in the study, 82 (female=31%, age $M=43.2$
12 years, $SD=11.0$) took part in round 1, comprising 61 applied experts (47% of those invited to
13 participate) and 21 academic experts (55% of those invited), with 62 of those individuals
14 (female=31%, age $M=43.1$ years, $SD=11.3$) completing all four rounds. Of those participants
15 who completed all four rounds, 46 (74%) were based in the U.K., nine in North America, five in
16 Australasia, and two in Europe. The panelists had a combined experience of 744 years working
17 with elite sport organizations ($M=12.0$ years, $SD=9.4$), across 50 sports and held a range of roles
18 including coaches, support staff, CEOs, and practitioners. Of the academic panelists ($n=17$), 47%
19 were from a sport psychology background and 53% from organizational psychology.

20 **Procedure**

21 *Participant recruitment*

22 Following institutional ethical approval, criterion sampling of individuals qualifying as
23 experts was used to select participants in three stages. First, an initial list was compiled
24 comprising professionals known to, or suggested by, the research team. Second, the initial list
25 was augmented to include at least one representative from each of the major professional sports

1 in the United Kingdom (football, rugby, and cricket), and each of the national governing bodies
2 of Olympic and Paralympic sports in Great Britain. Where no email was available, potential
3 panelists were contacted by LinkedIn. Third, recruitment was broadened using snowball
4 sampling by asking panelists to forward the contact on to others within their organization who
5 met the expert criteria. To enhance the response rate, all invitations to participate were
6 personalized, and a maximum of two reminder emails were sent for each round, in addition to
7 follow up individual “thank you” messages (Iqbal & Pison-Young, 2009). Informed consent was
8 obtained for each round. The study was conducted over seven months, with each round
9 remaining open for approximately four weeks.

10 *Delphi rounds*

11 Four Delphi rounds were employed with two aims, namely, to build consensus on
12 definitional aspects of organizational resilience in the elite sport context (rounds 1 and 2), and to
13 rate the importance of various potential resilient characteristics (rounds 3 and 4). For each aim,
14 the initial survey was constructed following a literature review of organizational resilience in
15 other performance domains, and individual and team resilience in sport, identifying areas of
16 conceptual ambiguity regarding the construct of organizational resilience together with key
17 results from the empirical research regarding potential characteristics of organizational
18 resilience. These areas of ambiguity and key results were converted into corresponding
19 statements presented in a uniform mode which were reviewed by the research team and, where
20 necessary, rephrased to ensure each item was standalone and consistent, and similar items were
21 consolidated. The draft surveys for rounds 1 and 3 were then piloted to check for clarity and
22 estimated completion time. As a result of feedback, the order of presentation of statements was
23 altered, and there was further consolidation of characteristics to reduce participant burden (for
24 example, “shared vision” and “shared values” were combined into “shared vision and values”,

1 and “hopeful” was subsumed within “optimistic”).¹

2 Throughout the data collection process, panelists were asked to draw on all their
3 experiences in elite sport, not just their current role. In round 1, panelists were presented with ten
4 statements concerning definitional and conceptual aspects of organizational resilience and asked
5 to choose the response which best reflected their views. For example, “Within elite sport,
6 organizational resilience is: a) a reaction to sudden stressors or changes, b) a reaction to
7 incremental changes over time, c) both options could apply, d) neither option is relevant.” In
8 addition to providing responses to the ten statements, all participants were asked to provide their
9 own definition of organizational resilience in elite sport. The requirement for participants to
10 suggest their own definition was intentionally placed *after* the ten statements to address potential
11 concerns amongst those working in elite sport, rather than academia, that they may not have
12 sufficient knowledge or awareness of organizational resilience to proffer their own definition.

13 In round 3, participants were asked to rate 63 potential characteristics of organizational
14 resilience drawn from the literature review on a four-point Likert scale from “very important” to
15 “not important”. Panelists were given the additional instruction in round 3 that “this section is
16 not about the characteristics of your current organization, or of a successful elite sport
17 organization, but of a resilient one.”

18 Rounds 2 and 4 consisted of items that failed to reach consensus in the preceding rounds
19 (rounds 1 and 3 respectively), together with feedback as to how other panel members had
20 responded. The feedback contained both statistics, and examples of comments provided by
21 participants, given the preference for this format by expert panelists (Meijering & Tobi, 2016).
22 The feedback aspect of the Delphi method is based on the rationale that group judgments are

¹ A copy of the items comprising each round is available from the lead author on request.

1 more compelling than individual opinions, but that it is also important that each expert has an
2 equal opportunity to impact the overall decision-making process (Okoli & Pawlowski, 2004). In
3 these rounds, participants were reminded, via email, of their original responses.

4 Participants were encouraged to add comments throughout each round, and these were
5 reviewed at each stage of the study with any issues addressed in the following round. For
6 example, in round 1, there were two statements regarding whether organizational resilience in the
7 elite sport context is different to other contexts, and whether it differs according to the type of
8 sport (see Table 1, statements 9 and 10). The comments indicated that there was a lack of clarity
9 amongst participants as to whether they were being asked if the contexts were different, or if the
10 concept was generalizable between contexts. A clarifying note was subsequently added to these
11 statements when they were repeated in round 2. As a further illustration, in round 3, some
12 participants stated that their responses would depend on contextual factors such as the size of the
13 organization. An additional response of “it depends” was subsequently included in round 4 with
14 a request for accompanying comments. Additionally, an item was clarified so that “Access to
15 resources (e.g., centrally controlled or freely available resources)” was re-presented as two
16 separate items of “Centrally controlled access to resources” and “Freely available access to
17 resources”. Although participants had been invited in round 3 to suggest any additional
18 characteristics to include within round 4, they were found to constitute rewordings of
19 characteristics already presented in round 3, for example “a compelling vision” was not regarded
20 as sufficiently unique from “shared vision and values” to warrant a new characteristic. Therefore,
21 while those suggestions were considered in the qualitative analysis, the research team felt that
22 none emerged consistently and separately from the existing list to warrant inclusion in round 4.

23 **Data Analysis**

24 The quantitative and qualitative data yielded by this research in the form of responses to,
25 and comments on, survey items necessitated different approaches to data analysis. For the

1 quantitative data produced in each round of the study, it was necessary to establish the degree of
2 consensus between panelists to determine whether items were to be retained or to be removed
3 from the next round. In determining how to calculate consensus in Delphi studies, it is necessary
4 to consider the research aims, the types of measurement items (von der Gracht, 2012), and the
5 number of possible responses (Diamond et al., 2014). In this study, two different percentage rates
6 were applied, to reflect the different types of measurement items and the different possible
7 responses in rounds 1 and 2, and 3 and 4 respectively. In rounds 1 and 2, the responses were
8 nominal and largely entailed four discrete responses (each item and the possible responses are
9 detailed in Table 1). Given the type and spread of possible responses, it was necessary to
10 introduce a higher level of sensitivity to the point at which consensus could be said to have been
11 reached than the more common figure of 75-80% for Likert-type scales (cf. von der Gracht,
12 2012). Specifically, the Average Percentage of Majority Opinion (AMPO; Kapoor, 1987)
13 attempts to quantify an appropriate percentage rate for consensus based on the actual data in a
14 specific Delphi study round (see Cottam et al., 2004; Price & Robinson, 2017). Based on the data
15 for round 1 the AMPO was calculated to be 65.1%, this being the sum of majority opinions
16 (round 1 responses chosen by >50% of participants, $n=801$) divided by total opinions expressed
17 (number of participants x number of questions, $n=82 \times 15^2=1,230$). In rounds 3 and 4, which
18 employed Likert scale ratings to determine the importance of potential resilient characteristics,
19 consensus was assessed using the most commonly employed method for these types of
20 responses, namely a pre-determined threshold of 80% (von der Gracht, 2012). This percentage
21 was applied to summed responses of either ‘important’ or ‘unimportant’ (e.g., Moreira et al.,

² As two of the ten statements in round 1 allowed more than one response, each option was treated as a separate question with “agree” or “disagree” as the possible answers for the purpose of calculating the APMO. This produced a total number of questions as 15.

1 2017). In the case of both preliminary rounds (i.e., rounds 1 and 3), items that reached or
2 exceeded the appropriate consensus threshold were removed, and unagreed items were carried
3 forward. As a result, four items were carried forward to round 2 and ten items were carried
4 forward to round 4.

5 All items that reached consensus in rounds 1 and 2, together with the accompanying
6 qualitative comments regarding definitional and conceptual aspects of organizational resilience
7 (totaling 27 pages of single-spaced text), were integrated through merging the data sets on an
8 item by item basis. Specifically, after calculating the percentage of participants agreeing with
9 each item response, the research team read and reread the accompanying comments, together
10 with the panelists' own suggested definitions, to explore the extent to which those comments
11 confirmed, expanded on, or were discordant with the apparent consensus response from the
12 quantitative data, weaving the analysis into a single definition (Fetters et al., 2013).

13 For the quantitative data from rounds 3 and 4, as well as determining whether items had
14 reached consensus, the item responses were also ranked numerically ("very important"=3, with
15 "not important"=0), from which mean rankings were calculated for each item. Items were rated
16 as "very important" to organizational resilience in elite sport if they had a mean ranking of 2.5 or
17 above, "somewhat important" for a mean ranking of 1.5-2.49, and "not very important" if the
18 mean ranking was below 1.5. For participants who selected the additional response of "it
19 depends" included in round 4 following participant comments in round 3, these responses were
20 treated as neutral and removed from the final ranking calculations (Adini et al., 2017). Only
21 those characteristics ranked as "very important" were retained for the next stage of analysis.

22 The resilient characteristics ranked as "very important" were subsequently considered as
23 qualitative data and analyzed alongside the participants accompanying comments from rounds 3
24 and 4 (totaling 13 pages of single-spaced text) using reflexive inductive thematic analysis (Braun
25 & Clarke, 2019) from a critical realist standpoint. The aim of this analysis was to identify

1 patterns of shared semantic meaning across data sets, as opposed to participants' individual
2 experiences, in line with the epistemological interpretivist approach that knowledge is the
3 product of intersubjective relations between individuals. Guided by the six phases suggested by
4 Braun and Clarke (2006) for conducting thematic analysis, the characteristics identified from the
5 consensus and ranking stage of analysis were treated as preliminary codes. The accompanying
6 comments provided by participants were explored to identify additional codes, or to rename the
7 preliminary codes. The codes were then examined to identify broader patterns, checking each
8 against the original dataset to ensure faithfulness to the integrated survey data and panelists'
9 comments and suggestions. Different combinations of themes were explored by the research
10 team, who adopted a predominantly inductive approach whilst acknowledging and reflexively
11 examining how the research team's knowledge of the extant literature was influencing the
12 development of themes. Once agreed, the description of each theme was refined, and exemplar
13 comments were chosen, before finally settling on the name of each theme.

14 Whilst it is common in thematic analysis for each data item to be given equal attention
15 during the coding process (Braun & Clarke, 2006), greater weighting was given in the present
16 study to the quantitative results of the Delphi surveys by using this data to identify initial patterns
17 or central concepts, given these represented the views of all participants, whereas the provision
18 of comments was voluntary with 58% of participants providing comments in round 3, and 42%
19 of participants providing comments in round 4. This prioritizing was to avoid concepts being
20 generated from a few vivid examples (Braun & Clarke, 2006).

21 **Methodological Quality**

22 The study was guided by a critical realist approach to judge the credibility and quality of
23 the research (Maxwell, 2017). In doing so, the research team accept that the Delphi method
24 cannot directly offer indisputable fact but instead provides a snapshot of a range of expert
25 opinions at a point in time which can be used to inform theory development (Okoli &

1 Pawlowski, 2004). Specifically, the Delphi method, through the ongoing feedback given to
2 panelists and invitation to reconsider dissensus responses or provide additional comments,
3 contains an inherent form of member reflection to increase the ontological plausibility of the
4 research findings (cf. Ronkainen & Wiltshire, 2019; Smith & McGannon, 2018).

5 Several quality indicators for Delphi studies are available. These include clearly stating
6 the aim of the Delphi method employed, and the criteria used to identify “expert” panelists and
7 to define consensus or agreement (Diamond et al., 2014; Hasson & Keeney, 2011). Involving
8 individuals from target organizations as “experts” helps to engage relevant stakeholders, and to
9 ground the research in its context (Linstone & Turoff, 1975). Resilience researchers were
10 included to integrate the research in a novel (sport) context with the wider resilience literature
11 across different levels of analysis and domains, and to address concerns of resilience being
12 studied in silos (Britt et al., 2016). The degree of consensus required when analyzing the data in
13 each round, and the restriction to four rounds of surveys in total, was determined before inviting
14 experts to participate. These decisions were guided by the origin of the survey items, having been
15 drawn from a literature review, and to minimize participant fatigue in light of the substantial
16 commitment required from participants in a Delphi study (Hasson et al., 2000).

17 **Results**

18 The results across four rounds of the Delphi study, together with analysis of the
19 accompanying qualitative commentary provided by the expert panel, are presented in two parts
20 to offer a definition of organizational resilience followed by the resilient characteristics, of elite
21 sport organizations. In each case a brief overview of the quantitative survey results is presented,
22 followed by examples from the integrated quantitative and qualitative data, to illuminate facets
23 of the suggested definition and the five characteristics of organizational resilience, namely
24 structural clarity, flexible improvement, shared understanding, reciprocal commitment, and
25 operational awareness.

1 **Definition of Organizational Resilience**

2 Based on the survey results across rounds 1 and 2 of the Delphi study, and the
3 accompanying comments provided by the expert panel, organizational resilience is defined as:

4 The dynamic capability of an organization to successfully deal with significant change. It
5 emerges from multi-level (employee, team, and organizational) interacting characteristics
6 and processes which enable an organization to prepare for, adapt to, and learn from
7 significant change.

8 An integrated summary of the quantitative results from rounds 1 and 2 of the Delphi
9 study is shown in Table 1. Of the eight statements which required a single response, six
10 statements achieved consensus in round 1 (statements 1-3 and 5-7), and two statements achieved
11 consensus in round 2 (statements 9 and 10 in Table 1). A further two statements (statements 4
12 and 8 in Table 1) allowed panelists to select as many of the responses as they felt were
13 applicable, with two of the seven possible responses (responses 4c and 8b) having achieved
14 consensus by the end of round 2. Panelists were also asked to provide their own definitions of
15 organizational resilience. Using the integrated quantitative and qualitative data, a definition of
16 organizational resilience was developed, and the panelists were given an opportunity to comment
17 on this definition during round 3. The comments were compared with the research data from
18 rounds 1 and 2 and discussed amongst the research team, which led to minor revisions to the
19 original proposed definition (e.g. “the” dynamic capability rather than “a” dynamic capability).

20 [INSERT TABLE 1 HERE]

21 In this study, our panel of experts were invited to evaluate and comment on the nuanced
22 ways in which organizational resilience has been defined, centered around two key concepts – an
23 unexpected or disruptive resilience event, and a positive outcome following that event (Britt et
24 al., 2016; Fletcher & Sarkar, 2013; Linnenluecke, 2017). In terms of an unexpected or disruptive
25 resilience event, our panelists reached consensus within statements 1 and 2 that resilience events

1 can span a range in intensity and duration from everyday incremental changes or stressors which
2 accumulate over time to sudden major events (see Table 1), with several panelists commenting
3 on how everyday hassles can be aggregated to be appraised as big problems, such that “even
4 seemingly small stressors could be perceived as big at an untimely moment”. Our resulting
5 conceptualization of resilience events as “significant change” purposefully retains some
6 linguistic ambiguity (Suddaby, 2010) to encompass this perceived breadth of dimensions for
7 resilience events.

8 Within statements 3 and 4, we explored proximal and distal positive outcomes, namely
9 what does the organization look like both immediately following exposure to significant change,
10 and in the longer term, if it is to be regarded as resilient. For proximal outcomes (statement 3),
11 72% of our panelists agreed that organizational resilience could encompass both an initial loss of
12 functioning immediately following the exposure to significant change before recovering and
13 deflecting changes such that there is no loss of functioning. Participants noted that positive
14 outcomes may depend on the nature of the resilience event, as well as organizational priorities in
15 the context of finite resources, described by a senior sport psychologist as “picking your battles”.

16 Within statement 4, we asked participants to select all relevant distal positive outcomes,
17 or resilience trajectories, listed in the survey as recovery to a former level, recovery to an
18 enhanced level, adaptation, and sustainability of recovery or adaptation. Although each response
19 was analyzed for consensus individually, the statement was re-presented to participants in round
20 2 in its entirety to standardize the statement across rounds as some of the responses did not
21 achieve consensus following round 1. Adaptation (response 4c) maintained a high level of
22 consensus (83%), and recovery (response 4a) maintained a lack of consensus across rounds as to
23 its relevance to organizational resilience. For the potential outcomes of recovery to an enhanced
24 level, and sustainability of recovery (responses 4b and 4d), participants demonstrated a reduced
25 consensus in round 2 following the feedback provided from round 1. Such movements in

1 consensus highlight the importance of integrating the accompanying comments with the
2 quantitative results on a statement by statement basis to interpret the data holistically. For
3 example, from the accompanying comments it was apparent many participants felt that enhanced
4 recovery could be a consequence of, rather than a necessary part of, resilience, and this
5 perspective was included in the feedback provided when participants were asked to complete
6 round 2. Given the panelists' inclusive perspective on proximal outcomes (statement 3), and the
7 lack of consensus on distal outcomes (statement 4), the authors' definition of organizational
8 resilience therefore refers to "successfully dealing with..." since it is not prescriptive as to the
9 exact nature of either the proximal or distal resilience outcomes, and appeared as a term used by
10 several participants ahead of similar expressions such as "withstand", "manage", "handle", "cope
11 with", and "overcome".

12 Within statement 5, we also explored whether organizational resilience was considered
13 by the expert panel to be a reactive phenomenon in response to changes in the external
14 environment or a proactive phenomenon, with organizations planning for potential resilience
15 events. Our panel concluded that organizational resilience comprised both reactive and proactive
16 elements (85%). Specifically, while the initial survey statement referred to "planning" when
17 discussing the proactive element of organizational resilience, participants instead referred to
18 "preparing for". "Preparation" goes beyond "planning" to include raising awareness, testing
19 plans, providing training, and embedding resilience processes (Boin & Lagadec, 2000), and
20 therefore seems to provide a better linguistic fit with organizational resilience.

21 In statement 8 we considered how organizational resilience has been conceptualized, with
22 researchers portraying this as a quality, a process, an outcome, or a combination of these. As was
23 the case for statement 4, statement 8 was re-presented to participants in round 2 in its entirety as
24 the quality and outcome elements (responses 8a and 8c) did not achieve consensus in round 1,
25 either for agreement or disagreement. Participants did reach and maintain consensus regarding

1 organizational resilience having a process component (78%), which from an analysis of the
2 accompanying comments reflects the “dynamic”, proactive element of resilience emerging or
3 developing over time. The panel failed to reach consensus regarding resilience as an outcome
4 (62% disagreeing) or a quality (58% agreeing) as illustrated in Table 1. This latter finding was
5 somewhat surprising given the majority of definitions provided by the participants (74%)
6 referred to organizational resilience as an “ability”, “capability”, or “capacity”. Our analysis of
7 the participants’ commentary led to the interpretation that the panelists regarded “quality” as
8 inferring a static concept, akin to a personality trait, rather than a skill that can be developed. The
9 final definition of organizational resilience as a “dynamic capability” which emerges over time
10 reflects the panelists' views and attempts to capture both the quantitative findings of a “dynamic”
11 process component and the high number of references to “capability” from the qualitative
12 analysis of definitions provided by the participants.

13 In statements 9 and 10, we explored the context specificity of resilience; that is, whether
14 organizational resilience in elite sport was perceived by the panelists as different to
15 organizational resilience in other domains, and indeed, whether it differs according to the type of
16 sport. There was consensus for organizational resilience as an overarching concept rather than
17 being specific to elite sport, with panelists noting that while resilient behaviors will likely vary
18 across sport types, the decontextualized term “organizational resilience” is the same regardless of
19 context. The data presented in Table 1 indicate that both statements 9 and 10 moved to consensus
20 across rounds 1 and 2. It is possible that this increase in consensus was due, at least in part, to a
21 clarifying note added to each of these two questions in round 2 that these statements were
22 concerned with similarities in the *concept* of organizational resilience, rather than similarities in
23 the *context* of elite sport or the types of *challenges* faced. The ability to amend survey items
24 during the research process following panellist feedback is a valuable quality of Delphi studies,
25 where experts’ degree of opinion change outside of such refinements is generally limited

1 (Meijering & Tobi, 2016; cf. Pilgrim et al., 2018; Thompson et al., 2018).

2 **Resilient Characteristics of Elite Sport Organizations**

3 The initial 63 items included in round 3 of the Delphi study yielded 33 items rated as
4 “very important” to organizational resilience in elite sport (i.e. with a mean ranking of 2.5 or
5 above). None of the items carried forwards to round 4 were rated as “very important”. Internal
6 communication (2.98), a desire to learn and improve (2.95), and role clarity (2.88) emerged as
7 the most important items for organizational resilience in elite sport, with longevity (1.06), low
8 tolerance of failure (1.12), and risk avoidance (1.17) as the lowest ranked items. A thematic
9 analysis of the 33 items ranked as “very important” to organizational resilience in elite sport,
10 integrated with the accompanying qualitative comments, were categorized into five themes to
11 represent the resilient characteristics of elite sport organizations: structural clarity, flexible
12 improvement, shared understanding, reciprocal commitment, and operational awareness. For
13 each resilient characteristic, relevant items from the Delphi study with their mean ranking and
14 percentage agreement, together with illustrative qualitative comments, are provided in Table 2.

15 [INSERT TABLE 2 HERE]

16 ***Structural clarity***

17 Structural clarity refers to the need for an organization to have a clear and effective
18 structure, particularly regarding communication channels, roles and responsibilities between
19 individuals and teams, and decision making. As noted by a performance director, “Every
20 organization needs a structure which is clear internally and externally. Crucially individual role
21 clarity and clarity of responsibility for and across discrete teams is also essential.” Three of the
22 top five ranked items in the Delphi survey are in this theme as shown in Table 2, namely
23 effective internal communication channels (2.98), role clarity (2.88), and transparent decision
24 making (2.84), with effective external communication channels (2.59) and a flexible or adaptable
25 structure (2.58) also rated as very important.

1 Overall, participants agreed that “communication is probably the most important part of
2 elite sport resilience,” with a warning that “Chinese whispers can kill any organization”.

3 Commenting on the link between communication and decision-making, a board director of a
4 national governing body noted the need for “emphasis on openness and transparency as to [the]
5 rationale for decisions whether strategic or operational to allow all levels of the organization to
6 grasp [the] rationale for decision-making”. Clear and effective communication channels were
7 also seen as providing the structure which facilitates shared understanding, with a performance
8 director explaining that through “getting comfortable in understanding what others are trying to
9 achieve and [making] communication happen, we achieve much better shared consciousness”.

10 The panelists’ comments regarding the role of team-level boundaries within an
11 organizational structure was illuminating for this theme. Boundaries were seen as potentially
12 impeding communication between groups, with a professor in organizational resilience noting
13 that “for resilient organizations communication and decision making needs to flow rapidly.”
14 Nevertheless, boundaries can also facilitate individual role clarity and provide space to focus on
15 team-specific goals, illuminated in the comment from a development director that the “right and
16 left hand need to talk to each other but also need that spacing to concentrate on their own goals”.
17 Several participants stated that clear structural boundaries may also provide important divisions
18 to allow delegated decision making and free allocation of resources within those boundaries,
19 given the number of variables which may be changing within an organization at any one time.
20 From the qualitative comments, it seems the importance lies not in whether boundaries exist or
21 not (which may be specific to the organizational type and size), but in clarity around where the
22 boundaries lie, and how teams coexist, communicate and benefit from each other. It was also
23 suggested that boundaries may provide important feedback regarding the extent to which
24 boundaries are challenged or stretched during times of adversity such that “when the tolerances
25 of those boundaries are exceeded during periods of adversity it can be recognized and the

1 potential impact identified”, with the ability to “flex and lean on other areas when needed or in
2 times of stress” as a way to absorb that strain.

3 *Flexible improvement*

4 Within a culture of flexible improvement, learning and innovation are valued and the
5 need for flexibility of approach is recognized. More than a mindset, this characteristic also
6 encapsulates the capability of an organization to learn and innovatively adapt. This combination
7 of culture and capability is embodied in one elite coach’s comment that “the organization doesn’t
8 have to have the most expensive equipment but it has to have human resources that are willing
9 and able to adapt to what is available to them”. A desire to learn and improve was the second
10 highest ranked item in the Delphi survey (2.95), reflected in the comment from a vice president
11 of a professional sport organization: “we realize the outcomes mean that we will make mistakes
12 and lose sometimes, but our commitment is to learn and get better every day” and that “if all you
13 try to do is not lose, you can never win.” Other items contributing towards the theme of flexible
14 improvement (see Table 2) include openness to ideas (2.77); adaptable/flexible (2.77); innovation
15 and creativity (2.61); accepting uncertainty and change (2.59); and optimism (2.53). Flexibility
16 of use (2.64), creating a solution out of whatever resources are available, is key to the capability
17 to adapt, with the human resources director of an elite sport organization noting “there needs to
18 be clarity of what resources are aligned to what priorities which should have some level of
19 flexibility which can be retargeted to new emerging priorities.”

20 Panelists’ qualitative comments regarding uncertainty, risk, and failure highlighted the
21 need to accept risk and failure as an inherent precursor of the capability to learn and adapt.
22 Specifically, panelists commented that pursuing innovation is likely to increase both rates of
23 failure and opportunities to learn and adapt, while noting this strategy will concurrently increase
24 the vulnerabilities or stressors in the system over the short term, for example by diminishing the
25 available resources. The lead psychologist for a national sport organization observed that in elite

1 sport too much resource can be allocated to innovation, and instead suggested “focusing on
2 nailing the basics really well and learning from others”. Furthermore, there was a tension
3 amongst participants between accepting failure in order to learn, and delivering high
4 performance, with concerns that “high tolerance [of failure] might mean that people do not push
5 themselves to achieve.” The pressures were summarized by a development director commenting
6 that “more is often learnt from failing in order to find the right way, but there does become a
7 point when organizations have to deliver.”

8 ***Shared understanding***

9 Shared understanding incorporates not only the organization’s vision and values (ranked
10 2.8 in the Delphi survey), but more widely across the organization a shared belief in the
11 collective ability to achieve goals (2.77), shared rules governing behavior (2.66), and shared
12 regard for unity and integration (2.55) including “a shared understanding of
13 individual/departmental strengths and a willingness to develop them further”. A sport
14 psychologist working in an elite football organization noted that “to have staff working on the
15 same page and delivering core messages that align throughout the organization is vital.” It seems
16 that a corporate vision on its own is not enough, and any vision or values must be shared
17 between an organization and its employees with “individual values and identity nurtured and
18 linked to the mission” and embedded into everyday processes if it is to galvanize collective effort
19 and drive behaviors, as highlighted by a performance director who explained:

20 I have worked in teams who 'believe' in the organization and its Vision, Mission,
21 Objectives and Values [“VMOV”] and in teams where the VMOV have either been weak
22 or where the leadership lacks the authenticity and passion to take their team on the
23 journey ... a compelling VMOV that attracts, develops and retains passionate employees
24 is critical.

25 ***Reciprocal commitment***

1 Reciprocal commitment recognizes the partnership between employees and employer as a
2 two-way allegiance within which employees feel valued, supported and safe, with a highly-cited
3 organizational resilience academic emphasizing the importance of “reciprocal commitment and
4 investment between members and the organization as well as a belief and demonstrated
5 behaviors that all groups of participants (players, owners, etc.) are valued comparably.” It was
6 interesting to note that our panelists ranked items such as employees feel valued (2.84), high
7 levels of employee loyalty and commitment (2.8) and enthusiasm (2.61), effective internal
8 partnerships (2.78), a trusting (2.77) and supportive (2.69) culture, and psychological safety
9 (2.66), as detailed in Table 2, over and above unidirectional items provided by the organization
10 to its employees such as prioritizing employee wellbeing (2.64), structured training programs
11 (2.58), appropriate remuneration (2.34), and job security (2.27), emphasizing the importance of
12 mutually supportive relationships amongst individuals, and between employees and the
13 organization. These items may be related, with a sport psychologist noting that “employees are
14 more likely to be enthusiastic if they are valued” and a board chairperson commenting “I think
15 people do their best work when they genuinely care about the people they work with/for, and
16 have fun at work. The organization can sustain this by ensuring the employee feels valued for
17 their contribution.” There was a particular emphasis on the high levels of loyalty within elite
18 sport organizations, and employees who are willing to go the extra mile because of the passion
19 for sport, with an operations manager for an elite sport organization commenting that this is the
20 case “without the remuneration or well-being offered by the organization being of the same
21 level” (presumably by comparison to other types of organization).

22 The resilient characteristic of reciprocal commitment incorporates a belief that the
23 organization is a safe place to fail (ranked 2.66), providing psychological safety (Edmondson,
24 1999), which it has been suggested supports organizational resilience through fostering a
25 willingness to take interpersonal risks (Lengnick-Hall et al., 2011), and cultivating a learning

1 capability (Edmondson, 1999). Linking psychological safety to other resilient characteristics of
2 structural clarity and flexible innovation, a national performance manager noted the importance
3 of clarity in communicating the acceptability of failure within an elite sport organization as “it’s
4 so easy to create a high fear-based environment” in a setting which is so focused on winning.

5 *Operational awareness*

6 Operational awareness is a capability to identify and assess the range of options available
7 to the organization through understanding the operating environment, available resources, and
8 alternative viewpoints. As shown in Table 2, items from the Delphi survey included the
9 capability to anticipate problems early (2.8), be aware of priorities in a crisis (2.69), be aware of
10 and understand the organization’s operating environment (2.66), to gather and consider
11 alternative viewpoints and options (2.59), to pause and reflect before making decisions (2.56),
12 and awareness of the opportunities or resources available (2.53). In particular, panelists from
13 both academic and applied backgrounds agreed that recovery from adversity requires an
14 understanding of environmental and organizational priorities so that leaders can monitor and
15 allocate resources appropriately.

16 While the capabilities of being able to respond rapidly (2.39), make decisions quickly
17 (2.28), and to pause and reflect before making decisions (2.56) reached consensus in the Delphi
18 survey, it was interesting to note that in a fast-paced, high-change, environment such as elite
19 sport that only the capability to pause and reflect was ranked as “very important”. Shedding light
20 on this further was the comment by the lead psychologist of a national team that “sport often
21 prioritizes urgency over strategic priority”. Thus, in terms of the speed of response, participants
22 suggested resilience is linked to the ability to make “timely” rather than “quick” decisions, and
23 that “it is about making decisions as rapidly as the situation requires”.

24 **Discussion**

25 The purpose of this study was to construct a definition of organizational resilience and to

1 identify the resilient characteristics of elite sport organizations. As such, this study provides a
2 timely contribution to the currently wide-ranging and fragmented organizational resilience
3 research by offering a compass to navigate an obfuscated definitional and conceptual landscape.
4 The definition that was constructed from the findings of the Delphi survey is “the dynamic
5 capability of an organization to successfully deal with significant change, emerging from multi-
6 level (employee, team, and organizational) interacting characteristics and processes which enable
7 an organization to prepare for, adapt to, and learn from significant change”. In contrast to extant
8 review-based work in which researchers have sought to extract and integrate key strands of the
9 heterogeneity of organizational resilience definitions, picking and choosing from those
10 originating in different research fields (e.g., Annarelli & Nonino, 2016; Conz & Magnani, 2020;
11 Linnenluecke, 2017), this is the first study which has sought to develop consensus from a panel
12 of experts as to which features and areas of ambiguity of organizational resilience definitions are
13 most suited to a specific context (in this case, elite sport).

14 Our discussion is centered around key insights regarding the two main parts of the
15 definition of organizational resilience, namely positive outcomes following unexpected or
16 disruptive resilience events, and the temporal phases and multiple levels across which
17 organizational resilience takes place. Furthermore, by integrating the five resilient characteristics
18 of elite sport organizations suggested by our findings (viz. structural clarity, flexible
19 improvement, shared understanding, reciprocal commitment, and operational awareness) into the
20 discussion with our proposed definition, alongside findings from the wider organizational
21 resilience and resilience in sport literatures, we hope to facilitate a multi-level understanding of
22 the concept of organizational resilience.

23 The first part of our proposed definition, “successfully deal with significant change”,
24 centres around positive outcomes following resilience events. Our findings suggest that the type
25 of outcome regarded as “successful” in a specific context may depend on the nature of the

1 change faced by an organization, given the potential scope of intensity and duration that our
2 panellists felt could be encompassed within resilience events. Whether an outcome is successful
3 or not will also be interpreted with reference to organizational priorities and values, an integral
4 part of the shared understanding resilient characteristic, alongside collective efficacy and group
5 norms. Previous organizational resilience research has highlighted the importance of shared
6 goals, values, and vision (Billington et al, 2017; Chen, 2016; Larsson et al., 2016; Ortiz-de-
7 Mandojana & Bansal, 2016; Witmer & Mellinger, 2016), and research by Morgan et al. (2013,
8 2015) has suggested that social identity and collective efficacy are key factors for team resilience
9 in elite sport. The importance of the organizational-level characteristic of shared understanding
10 may lie not only in its ability to guide individual-level employee behaviours towards
11 organizational-level goals, but also in helping to identify when those goals have been
12 successfully achieved in the face of significant change.

13 We incorporated the term “deal with” significant change to encompass the variety of
14 outcomes which could immediately follow the impact of significant change on an organization,
15 including an initial loss of functioning immediately following the change before recovering (cf.
16 Koronis & Ponis, 2018; Sheffi, 2005), and deflecting changes such that there is no loss of
17 functioning (cf. Boin & van Eeten, 2013; Weick & Roberts, 1993). The inclusive term “deal
18 with” also mirrors the breadth of potential proximal outcomes following significant change
19 across the individual (Britt et al., 2016) and team (Gucciardi et al., 2018) resilience literatures.

20 Furthermore, by referring to “significant change”, this reflects the dynamic and
21 interactive nature of resilience events suggested by our panellists. This terminology moves away
22 from organizational resilience research originating in crisis management (see Williams et al.,
23 2017) pursuant to which resilience events are seen as predominantly unexpected and externally
24 generated, or in the alternative, research originating in high-reliability organizations (e.g. Weick
25 et al., 1999) where resilience events are frequently ongoing and foreseeable. Instead the

1 terminology moves towards a systems-based model in which the interactions between an
2 organization and the environment are dynamic and emergent (e.g. Holling, 1973). Reviewing
3 organizational resilience literature in health systems, Barasa et al. (2018) noted that a framework
4 of complex adaptive systems is commonly used to understand resilience as an emergent property
5 of systems interacting and adapting in a dynamic and non-linear manner, enabling organizations
6 to adjust to multiple changes at any given time (Cilliers, 2001; de Coning, 2016). Overall,
7 defining organizational resilience as a dynamic capability to successfully deal with significant
8 change represents a shift in organizational resilience thinking away from simplistic engineering-
9 based models in which external, singular events cause an organization to temporarily deviate
10 from a linear trajectory. Instead, organizational resilience is expressed in terms of a complex
11 systems-based model in which resilience events, organizational systems, and their wider
12 sociocultural context dynamically interact (Morgeson et al., 2015).

13 The second part of our proposed definition of organizational resilience incorporates the
14 temporal phases and multiple levels across which organizational resilience takes place, described
15 as “emerging from multi-level (employee, team, and organizational) interacting characteristics
16 and processes which enable an organization to prepare for, adapt to, and learn from significant
17 change.” Noting the dynamic interplay between individuals and their organizational
18 environments, this aspect of our definition is underpinned by the resilient characteristic of
19 reciprocal commitment that recognizes the employee-employer relationship. In their focus-group
20 research with resilient sport teams, Morgan et al. (2013) identified the existence of high-quality
21 interactions and caring relationships within the team, termed “social capital”, as a key
22 characteristic of team resilience in elite sport. Empirical evidence has emerged to demonstrate
23 that a lack of support and connection undermines organizational resilience (Branicki et al.,
24 2019), suggesting that it may be beneficial to explore organizational resilience from the
25 perspective of relational systems (Kahn et al., 2013) in which employees, teams, and society are

1 considered as an integral part of the organization rather than as separate entities. Specifically,
2 how employees successfully co-ordinate, make sense of, and respond to significant change
3 within the context of supportive and safe relationships to produce resilient outcomes merits
4 further exploration (Barton & Kahn, 2019).

5 The capability of an organization to *prepare for* significant change is underpinned by the
6 resilient characteristic of operational awareness, mirroring previous literature which highlighted
7 the importance of organizations having an understanding of their operating environment (Boin &
8 van Eeten, 2013; Hopkin, 2014; Lee et al., 2013; McManus et al., 2008). Within the individual
9 and team resilience in sport literatures, challenge appraisal (Fletcher & Sarkar, 2012) and
10 collective positive appraisal of setbacks (Morgan et al., 2015) foreground a positive evaluation of
11 current stressors, but do not incorporate proactive attempts to monitor, identify, realistically
12 assess, and prepare for potential future stressors.

13 The capability of an organization to *adapt to* significant change will be influenced by its
14 cultural and structural characteristics (Barasa et al., 2018), specifically the resilient characteristic
15 of flexible improvement. Within an organization's culture, comprising the shared values, beliefs,
16 and practices governing the way employees think about and act on challenges (Choi et al., 2010;
17 Cruickshank & Collins, 2012), the importance of a willingness to adapt (Lee et al., 2013;
18 McManus et al., 2008) and a desire to learn and continuously improve (Chen, 2016; Pal et al.,
19 2014) have been found to be relevant for organizational resilience.

20 Alongside a willingness to adapt, there needs to be the capability to do so. Adaptive
21 systems rely on dynamic interactions and feedback in order to assess the need for, and
22 consequences of, adaptation (de Coning, 2016). In both the present study, and the findings of
23 Morgan et al. (2013) in relation to team resilience in elite sport, communication channels were
24 important structural aspects of resilient characteristics. This suggests a need to understand the
25 channels through which teams within organizations communicate and interact in times of

1 change. Specifically, Kahn et al. (2018) noted that significant change is unlikely to be
2 experienced uniformly across an organization, highlighting the need to understand the
3 interactions through which the impact subsequently spreads (Morgeson et al., 2015).

4 By incorporating reference to multi-level characteristics and processes, and the phases of
5 preparing, adapting, and learning from significant change within the definition of organizational
6 resilience, attention is focused on the interactive and temporal elements of organizational
7 resilience, facilitating an understanding of organizational resilience as a dynamic and complex
8 phenomenon emerging from interactions between individuals and within teams and which
9 manifests collectively over time in the context of organizational factors which shape and
10 constrain these lower level phenomenon (Kozlowski et al., 2016).

11 **Strengths and Limitations**

12 This research was notable both in terms of the large number, and range, of experience of
13 participants, and also the breadth of sports and roles represented in elite sport. The low drop-out
14 rate across the study (averaging less than 10% between each Delphi round) was particularly
15 noteworthy given the number of rounds and therefore the required workload, together with the
16 number of items in each round. However, the study is not without its limitations. While the
17 Delphi panel consisted of experts representing a range of applied and academic disciplines, the
18 study would have benefitted from the inclusion of participants from wider cultural backgrounds
19 to advance a socio-culturally sensitive understanding of organizational resilience. Similarly, it
20 would be useful to explore how representative the findings from an elite sport context are to the
21 wider sport context, such as community-based sport organizations focused on enhancing local
22 physical activity participation. Finally, it is unclear the extent to which experts were persuaded to
23 move towards consensus between Delphi rounds following feedback provided from the previous
24 round. In researching expert consensus during Delphi studies, Meijering and Tobi (2016) found
25 no significant move in the opinions of experts between rounds. The utility of additional rounds in

1 Delphi studies may instead lie in the ability for researchers to amend and clarify items in line
2 with expert opinion, rather than increasing the level of consensus per se.

3 **Practical Implications and Future Research Directions**

4 The identification of five resilient characteristics of elite sport organizations provides a
5 framework for practitioners to design interventions targeted at enhancing organizational
6 resilience in elite sport. The extent to which any such organizational-level interventions may also
7 positively impact employee resilience merits further attention, given the likely mutually
8 beneficial interactions. For example, research has indicated that organizational resilience
9 supports individual resilience (Kuntz et al., 2016), individual resilience supports wellbeing (e.g.
10 Grant et al., 2009; Sood et al., 2011), and employee wellbeing constitutes a fundamental factor in
11 organizational resilience (Nilakant et al., 2016). More specifically, organizational structures and
12 values can signpost desirable employee behaviors (Kuntz et al., 2016), balancing challenging
13 work with autonomy can support innovative goals (Li et al., 2014), and encouraging network-
14 leveraging collaborative behaviors can improve employee wellbeing and adaptability (Kuntz et
15 al., 2016). Therefore, interventions targeted at enhancing structural clarity, such as an informal
16 communications audit, could shed light on the effectiveness of formal communication channels
17 and also signpost open and transparent communication behaviors. Network-leveraging mentoring
18 schemes are an opportunity to enhance reciprocal commitment within an organization. Scenario
19 planning is a multi-purpose intervention which can be used to evaluate operational awareness,
20 enhance shared understanding, and support flexible improvement. Specifically, identifying
21 potential significant changes and how equipped the organization is to deal with them illuminates
22 the organization's current operational awareness (McManus et al., 2008). Shared understanding
23 is enhanced through the growth of mutual understanding among those involved in the planning
24 process (Crichton et al., 2009). Finally, practitioners could design scenario planning exercises
25 targeted at supporting flexible improvement which involve the mobilization of increasingly

1 scarce resources to balance employee challenge and autonomy.

2 The present study has identified resilient characteristics indicating what a resilient elite
3 sport organization *has*. Future research to examine what a resilient elite sport organization *does*,
4 and to identify the underlying dynamic processes, would benefit from a longitudinal perspective.
5 At the individual level, key resilience processes include event appraisal, coping/self-regulatory
6 efforts, and social support (Britt et al., 2016; Fisher et al., 2019). At the team level, key resilience
7 processes include information sharing, monitoring, planning, accessing and deployment of
8 resources, social identity, team learning, intra-team relationships, and shared leadership (Bowers
9 et al., 2017; Gucciardi et al. 2018; Hartmann et al., 2019; Hartwig et al., 2020; Morgan et al.,
10 2015). At the organizational level, Wagstaff et al. (2020) suggest that planning, adaptation,
11 learning, relationship networks, and leadership may be important. Thus, a deeper understanding
12 of the relative contributions of, and mutual interactions between, these multi-level processes over
13 time will greatly enhance future organizational resilience research.

14 **Conclusion**

15 The results presented in this study provide a novel and significant contribution to the field
16 of sport psychology by identifying and consolidating a wide variety of concepts pertaining to
17 organizational resilience and evaluating their applicability to the elite sport context, providing a
18 vital stepping stone between conceptual development and empirical research (Verreynne et al.,
19 2018). The formulation of a definition of organizational resilience and the identification of
20 resilient characteristics of elite sport organizations endorsed by experts working within elite sport
21 lends legitimacy to this research stream as an area worth investigating further, both by academics
22 and practitioners. While changing organizational practices will be more challenging than
23 focusing on individual and team level behaviors (Sarkar, 2018), this focus on organizational-
24 level factors is an essential component of creating high performance environments in which
25 individuals, teams, and organizations can thrive (Wagstaff, 2017).

References

- 1
2 Adini, B., Cohen, O., Eide, A. W., Nilsson, S., Aharonson-Daniel, L., & Herrera, I. A. (2017).
3 Striving to be resilient: What concepts, approaches and practices should be incorporated
4 in resilience management guidelines? *Technological Forecasting and Social*
5 *Change, 121*, 39–49.
- 6 Annarelli, A., & Nonino, F. (2016). Strategic and operational management of organizational
7 resilience: Current state of research and future directions. *Omega, 62*, 1–18.
- 8 Archer, M. (2007). The ontological status of subjectivity: The missing link between structure and
9 agency. In C. Lawson, J. Latsis, & N. Martins (Eds.), *Contributions to social ontology*
10 (pp. 17–31). Routledge.
- 11 Arnold, R., & Fletcher, D. (2012). A research synthesis and taxonomic classification of the
12 organizational stressors encountered by sport performers. *Journal of Sport and Exercise*
13 *Psychology, 34*(3), 397–429.
- 14 Barasa, E., Mbau, R., & Gilson, L. (2018). What is resilience and how can it be nurtured? A
15 systematic review of empirical literature on organizational resilience. *International*
16 *Journal of Health Policy and Management, 7*(6), 491–503.
- 17 Barton, M. A., & Kahn, W. A. (2019). Group resilience: The place and meaning of relational
18 pauses. *Organization Studies, 40*(9), 1409–1429.
- 19 Billington, M. G., Karlsen, J., Mathisen, L., & Pettersen, I. B. (2017). Unfolding the relationship
20 between resilient firms and the region. *European Planning Studies, 25*(3), 425–442.
- 21 Boin, A., & Lagadec, P. (2000). Preparing for the future: critical challenges in crisis
22 management. *Journal of Contingencies and Crisis Management, 8*(4), 185–191.
- 23 Boin, A., & van Eeten, M. J. G. (2013). The resilient organization. *Public Management Review,*
24 *15*(3), 429–445.
- 25 Boudreaux, C.J., Karahan, G., & Coats, M. (2016). Bend it like FIFA: corruption on and off the

- 1 pitch, *Managerial Finance*, 42(9), 866–878.
- 2 Bowers, C., Kreutzer, C., Cannon-Bowers, J., & Lamb, J. (2017). Team resilience as a second-
3 order emergent state: A theoretical model and research directions. *Frontiers in*
4 *Psychology*, 8, 1360.
- 5 Branicki, L., Steyer, V., & Sullivan-Taylor, B. (2019). Why resilience managers aren't resilient,
6 and what human resource management can do about it. *The International Journal of*
7 *Human Resource Management*, 30(8), 1261–1286.
- 8 Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in*
9 *Psychology*, 3(2), 77–101.
- 10 Braun, V., & Clarke, V. (2019) Reflecting on reflexive thematic analysis. *Qualitative Research in*
11 *Sport, Exercise and Health*, 11(4), 589–597.
- 12 Britt, T. W., Shen, W., Sinclair, R. R., Grossman, M. R., & Klieger, D. M. (2016). How much do
13 we really know about employee resilience?. *Industrial and Organizational*
14 *Psychology*, 9(2), 378–404.
- 15 Bryan, C., O'Shea, D., & MacIntyre, T. (2019). Stressing the relevance of resilience: A
16 systematic review of resilience across the domains of sport and work. *International*
17 *Review of Sport and Exercise Psychology*, 12(1), 70–111.
- 18 Burnard, K., & Bhamra, R. (2011). Organisational resilience: Development of a conceptual
19 framework for organisational responses. *International Journal of Production*
20 *Research*, 49(18), 5581–5599.
- 21 Cilliers, P. (2001). Boundaries, hierarchies and networks in complex systems. *International*
22 *Journal of Innovation Management*, 5(2), 135–147.
- 23 Chen, S. H. (2016). Construction of an early risk warning model of organizational resilience: An
24 empirical study based on samples of R&D teams. *Discrete Dynamics in Nature and*
25 *Society*, 1–9.

- 1 Choi, Y. S., Seo, M., Scott, D., & Martin, J. (2010). Validation of the organizational culture
2 assessment instrument: An application of the Korean version. *Journal of Sport*
3 *Management, 24*(2), 169–189.
- 4 Conz, E., & Magnani, G. (2020). A dynamic perspective on the resilience of firms: A systematic
5 literature review and a framework for future research. *European Management Journal,*
6 *38*(3), 400–412.
- 7 Cottam, H., Roe, M., & Challacombe, J. (2004). Outsourcing of trucking activities by relief
8 organizations. *Journal of Humanitarian Assistance, 1*(1), 1–26.
- 9 Crichton, M. T., Ramsay, C. G., & Kelly, T. (2009). Enhancing organizational resilience through
10 emergency planning: Learnings from cross-sectoral lessons. *Journal of Contingencies*
11 *and Crisis Management, 17*(1), 24-37.
- 12 Cruickshank, A., & Collins, D. (2012). Culture change in elite sport performance teams:
13 Examining and advancing effectiveness in the new era. *Journal of Applied Sport*
14 *Psychology, 24*(3), 338–355.
- 15 Dalgaard-Nielsen, A. (2017). Organizational resilience in national security bureaucracies:
16 Realistic and practicable? *Journal of Contingencies and Crisis Management, 25*(4), 341–
17 349.
- 18 Daykin, N., Mansfield, L., Payne, A., Kay, T., Meads, C., D’Innocenzo, G., Burnett, A., Dolan,
19 P., Julier, G., Longworth, L., & Tomlinson, A. (2017). What works for wellbeing in
20 culture and sport? Report of a DELPHI process to support coproduction and establish
21 principles and parameters of an evidence review. *Perspectives in Public Health, 137*(5),
22 281–288.
- 23 de Coning, C. (2016). From peacebuilding to sustaining peace: Implications of complexity for
24 resilience and sustainability. *Resilience, 4*(3), 166–181.
- 25 Diamond, I. R., Grant, R. C., Feldman, B. M., Pencharz, P. B., Ling, S. C., Moore, A. M., &

- 1 Wales, P. W. (2014). Defining consensus: a systematic review recommends methodologic
2 criteria for reporting of Delphi studies. *Journal of Clinical Epidemiology*, 67(4), 401–
3 409.
- 4 Duarte Alonso, A., & Bressan, A. (2015). Resilience in the context of Italian micro and small
5 wineries: An empirical study. *International Journal of Wine Business Research*, 27(1),
6 40–60.
- 7 Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business*
8 *Research*, 13, 215–246.
- 9 Dure, B. (2019, April 24). 15 months on from Larry Nassar, USA Gymnastics struggles to find
10 its way. *The Guardian*. [https://www.theguardian.com/sport/2019/apr/24/15-months-on-](https://www.theguardian.com/sport/2019/apr/24/15-months-on-from-larry-nassar-usa-gymnastics-struggles-to-find-its-way)
11 from-larry-nassar-usa-gymnastics-struggles-to-find-its-way.
- 12 Edmondson, A. (1999). Psychological safety and learning behavior in work teams.
13 *Administrative Science Quarterly*, 44(2), 350–383.
- 14 Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods
15 designs—principles and practices. *Health Services Research*, 48(6pt2), 2134–2156.
- 16 Fisher, D. M., Ragsdale, J. M., & Fisher, E. C. (2019). The importance of definitional and
17 temporal issues in the study of resilience. *Applied Psychology*, 68(4), 583–620.
- 18 Fitzgerald, A. (2018). Querying the resilient local authority: the question of ‘resilience for
19 whom?’. *Local Government Studies*, 44(6), 788–806.
- 20 Fletcher, D., & Sarkar, M. (2012). A grounded theory of psychological resilience in Olympic
21 champions. *Psychology of Sport and Exercise*, 13(5), 669–678.
- 22 Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions,
23 concepts, and theory. *European Psychologist*, 18(1), 12–23.
- 24 Fletcher, D., & Sarkar, M. (2016). Mental fortitude training: An evidence-based approach to
25 developing psychological resilience for sustained success. *Journal of Sport Psychology in*

- 1 *Action*, 7(3), 135–157.
- 2 Fletcher, D., & Wagstaff, C. R. D. (2009). Organizational psychology in elite sport: Its
3 emergence, application and future. *Psychology of Sport and Exercise*, 10, 427–434.
- 4 Fogarty, G. J., & Perera, H. N. (2016). Resilience: Distinct construct or conglomerate of existing
5 traits?. *Industrial and Organizational Psychology*, 9(2), 422–429.
- 6 Gittell, J. H., Cameron, K., Lim, S., & Rivas, V. (2006). Relationships, layoffs, and
7 organizational resilience: Airline industry responses to September 11. *Journal of Applied*
8 *Behavioral Science*, 42(3), 300–329.
- 9 Grant, A. M., Curtayne, L., & Burton, G. (2009). Executive coaching enhances goal attainment,
10 resilience and workplace well-being: A randomized controlled study. *The Journal of*
11 *Positive Psychology*, 4, 396–407.
- 12 Grey-Thompson, T. (2017). *Duty of care in sport review*. Independent report to government.
13 Available at www.gov.uk/government/publications/duty-of-care-in-sport-review.
- 14 Gucciardi, D. F., Crane, M., Ntoumanis, N., Parker, S. K., Thøgersen - Ntoumani, C., Ducker, K.
15 J., Peeling, P., Chapman, M.T., Quedsted, E., & Temby, P. (2018). The emergence of team
16 resilience: A multilevel conceptual model of facilitating factors. *Journal of Occupational*
17 *and Organizational Psychology*, 91(4), 729–768.
- 18 Hamel, G., & Valikangas, L. (2003). The quest for resilience. *Harvard Business Review*, 81(9),
19 52–65.
- 20 Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2020). Resilience in the workplace: A
21 multilevel review and synthesis. *Applied Psychology*, 69(3), 913–959.
- 22 Hartwig, A., Clarke, S., Johnson, S., & Willis, S. (2020). Workplace team resilience: A
23 systematic review and conceptual development. *Organizational Psychology Review*, 1–
24 32.
- 25 Hasson, F., & Keeney, S. (2011). Enhancing rigor in the Delphi technique research.

- 1 *Technological Forecasting and Social Change*, 78(9), 1695–1704.
- 2 Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey
3 technique. *Journal of Advanced Nursing*, 32(4), 1008–1015.
- 4 Holling, C. S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology
5 and Systematics*, 4, 1–23.
- 6 Hopkin, P. (2014). Achieving enhanced organisational resilience by improved management of
7 risk: Summary of research into the principles of resilience and the practices of resilient
8 organisations. *Journal of Business Continuity & Emergency Planning*, 8(3), 252–262.
- 9 Iqbal, S., & Pison-Young, L. (2009). The Delphi method. *Psychologist*, 22(7), 598–601.
- 10 Kahn, W. A., Barton, M. A., & Fellows, S. (2013). Organizational crises and the disturbance of
11 relational systems. *Academy of Management Review*, 38(3), 377–396.
- 12 Kahn, W. A., Barton, M. A., Fisher, C. M., Heaphy, E. D., Reid, E. M., & Rouse, E. D. (2018).
13 The geography of strain: Organizational resilience as a function of intergroup
14 relations. *Academy of Management Review*, 43(3), 509–529.
- 15 Kapoor, P. (1987). *Systems approach to documentary maritime fraud* [Doctoral thesis, Plymouth
16 Polytechnic]. University of Plymouth repository.
17 <https://pearl.plymouth.ac.uk/handle/10026.1/422>.
- 18 Koronis, E., & Ponis, S. (2018). Better than before: The resilient organization in crisis mode.
19 *Journal of Business Strategy*, 39(1), 32–42.
- 20 Kozlowski, S. W., Chao, G. T., Grand, J. A., Braun, M. T., & Kuljanin, G. (2016). Capturing the
21 multilevel dynamics of emergence: Computational modeling, simulation, and virtual
22 experimentation. *Organizational Psychology Review*, 6(1), 3–33.
- 23 Kuntz, J. R., Näswall, K., & Malinen, S. (2016). Resilient employees in resilient organizations:
24 Flourishing beyond adversity. *Industrial and Organizational Psychology*, 9(2), 456–462.
- 25 Larsson, M., Milestad, R., Hahn, T., & von Oelreich, J. (2016). The resilience of a sustainability

- 1 entrepreneur in the Swedish food system. *Sustainability*, 8(550), 1–18.
- 2 Lee, A. V., Vargo, J., & Seville, E. (2013). Developing a tool to measure and compare
3 organizations' resilience. *Natural Hazards Review*, 14(1), 29–41.
- 4 Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for
5 organizational resilience through strategic human resource management. *Human Resource
6 Management Review*, 21(3), 243–255.
- 7 Li, W. D., Fay, D., Frese, M., Harms, P. D., & Gao, X. Y. (2014). Reciprocal relationship
8 between proactive personality and work characteristics: A latent change score
9 approach. *Journal of Applied Psychology*, 99(5), 948–965.
- 10 Linnenluecke, M. K. (2017). Resilience in business and management research: A review of
11 influential publications and a research agenda. *International Journal of Management
12 Reviews*, 19(1), 4–30.
- 13 Linstone, H. A., & Turoff, M. (Eds.). (1975). *The Delphi Method: Techniques and Applications*.
14 Addison-Wesley.
- 15 Maxwell, J. A. (2017). The validity and reliability of research: A realist perspective. In D. Wyse,
16 L. E. Suter, E. Smith, & N. Selwyn (Eds.), *The BERA/SAGE handbook of educational
17 research* (pp. 116–140). Sage.
- 18 McManus, S., Seville, E., Vargo, J., & Brunsdon, D. (2008). Facilitated process for improving
19 organizational resilience. *Natural Hazards Review*, 9(2), 81–90.
- 20 Meijering, J. V., & Tobi, H. (2016). The effect of controlled opinion feedback on Delphi features:
21 Mixed messages from a real-world Delphi experiment. *Technological Forecasting and
22 Social Change*, 103, 166–173.
- 23 Molan, C., Kelly, S., Arnold, R., & Matthews, J. (2019). Performance management: A systematic
24 review of processes in elite sport and other performance domains. *Journal of Applied
25 Sport Psychology*, 31(1), 87–104.

- 1 Moreira, D. G., Costello, J. T., Brito, C. J., Adamczyk, J. G., Ammer, K., Bach, A. J., Costa,
2 C.M., Eglin, C., Fernandes, A.A., Fernández-Cuevas, I., & Ferreira, J. J. (2017).
3 Thermographic imaging in sports and exercise medicine: A Delphi study and consensus
4 statement on the measurement of human skin temperature. *Journal of Thermal*
5 *Biology*, *69*, 155–162.
- 6 Morgan, P. B., Fletcher, D., & Sarkar, M. (2013). Defining and characterizing team resilience in
7 elite sport. *Psychology of Sport and Exercise*, *14*(4), 549–559.
- 8 Morgan, P. B., Fletcher, D., & Sarkar, M. (2015). Understanding team resilience in the world's
9 best athletes: A case study of a rugby union World Cup winning team. *Psychology of*
10 *Sport and Exercise*, *16*(1), 91–100.
- 11 Morgan, P. B., Fletcher, D., & Sarkar, M. (2017). Recent developments in team resilience
12 research in elite sport. *Current Opinion in Psychology*, *16*, 159–164.
- 13 Morgan, P. B., Fletcher, D., & Sarkar, M. (2019). Developing team resilience: A season-long
14 study of psychosocial enablers and strategies in a high-level sports team. *Psychology of*
15 *Sport and Exercise*, *45*, 101543.
- 16 Morgeson, F. P., Mitchell, T. R., & Liu, D. (2015). Event system theory: An event-oriented
17 approach to the organizational sciences. *Academy of Management Review*, *40*(4), 515–537.
- 18 Nilakant, V., Walker, B., Kuntz, J., de Vries, H., Malinen, S., Näswall, K., & van Heugten, S.
19 (2016). Dynamics of organizational response to a disaster: A study of organizations
20 impacted by earthquakes. In M. Hall, S. Malinen, R. Wordsworth, & R. Vosslander
21 (Eds.), *Business and post-disaster management: Business, organisational and consumer*
22 *resilience and the Christchurch earthquakes* (pp. 35–48). Routledge.
- 23 Okoli, C., & Pawlowski, S. D. (2004). The Delphi method as a research tool: An example, design
24 considerations and applications. *Information & Management*, *42*(1), 15–29.
- 25 Ortiz-de-Mandojana, N., & Bansal, P. (2016). The long-term benefits of organizational resilience

- 1 through sustainable business practices. *Strategic Management Journal*, 37(8), 1615–
2 1631.
- 3 Pal, R., Torstensson, H., & Mattila, H. (2014). Antecedents of organizational resilience in
4 economic crises—an empirical study of Swedish textile and clothing SMEs. *International*
5 *Journal of Production Economics*, 147, 410–428.
- 6 Parent, M. M., Naraine, M. L., & Hoye, R. (2018). A new era for governance structures and
7 processes in Canadian national sport organizations. *Journal of Sport Management*, 32(6),
8 555–566.
- 9 Pilgrim, J., Kremer, P., & Robertson, S. (2018). The development of a tournament preparation
10 framework for competitive golf: A Delphi study. *European Journal of Sport*
11 *Science*, 18(7), 930–939.
- 12 Price, L., & Robinson, L. (2017). ‘Being in a knowledge space’: Information behaviour of cult
13 media fan communities. *Journal of Information Science*, 43(5), 649–664.
- 14 Rahi, K. (2019). Indicators to assess organizational resilience—a review of empirical
15 literature. *International Journal of Disaster Resilience in the Built Environment*, 10(2),
16 85–98.
- 17 Ravensbergen, H. R., Mann, D. L., & Kamper, S. J. (2016). Expert consensus statement to guide
18 the evidence-based classification of Paralympic athletes with vision impairment: A
19 Delphi study. *British Journal of Sports Medicine*, 50, 386–391.
- 20 Ronkainen, N.J., & Wiltshire, G. (2019). Rethinking validity in qualitative sport and exercise
21 psychology research: A realist perspective. *International Journal of Sport and Exercise*
22 *Psychology*, 1–16.
- 23 Rumbold, J. L., Fletcher, D., & Daniels, K. (2018). Using a mixed method audit to inform
24 organizational stress management interventions in sport. *Psychology of Sport and*
25 *Exercise*, 35, 27–38.

- 1 *Russia banned for four years to include 2020 Olympics and 2022 World Cup.* (2019, December
2 9). BBC Sport. <https://www.bbc.co.uk/sport/olympics/50710598>.
- 3 Ryba, T. V., Wiltshire, G., North, J., & Ronkainen, N. J. (in press). Developing mixed methods
4 research in sport and exercise psychology: Potential contributions of a critical realist
5 perspective. *International Journal of Sport and Exercise Psychology*.
- 6 Sarkar, M. (2018). Developing resilience in elite sport: The role of the environment. *The Sport
7 and Exercise Scientist, 55*, 20–21.
- 8 Sarkar, M., & Fletcher, D. (2014). Psychological resilience in sport performers: A review of
9 stressors and protective factors. *Journal of Sports Sciences, 32*(15), 1419–1434.
- 10 Sheffi, Y. (2005). *The resilient enterprise: Overcoming vulnerability for competitive advantage*.
11 MIT Press.
- 12 Shilbury, D., & Ferkins, L. (2020). An overview of sport governance scholarship. In D. Shilbury
13 & L. Ferkins (Eds.), *Routledge handbook of sport governance* (pp.3–17). Routledge.
- 14 Shoenfelt, E. L. (2016). How much do we really know about employee resilience? More, if we
15 include the sport psychology resilience research. *Industrial and Organizational
16 Psychology, 9*(2), 442–446.
- 17 Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and
18 opportunities within sport and exercise psychology. *International Review of Sport and
19 Exercise Psychology, 11*(1), 101-121.
- 20 Sood, A., Prasad, K., Schroeder, D., & Varkey, P. (2011). Stress management and resilience
21 training among Department of Medicine faculty: A pilot randomized clinical
22 trial. *Journal of General Internal Medicine, 26*(8), 858–861.
- 23 Suddaby, R. (2010). Construct clarity in theories of management and organization: Editor's
24 comments. *Academy of Management Review, 35*(3), 346–357.
- 25 Swann, C., Moran, A., & Piggott, D. (2015). Defining elite athletes: Issues in the study of expert

- 1 performance in sport psychology. *Psychology of Sport and Exercise*, 16, 3–14.
- 2 Tarba, S. Y., Cooper, S. C. L., Ahammad, M. F., Khan, Z., & Rao-Nickolson, R. (2017). Special
3 issue—call for papers: Resilience in organizations. *Applied Psychology*, 66(1), 196–201.
- 4 Thompson, E. G., Knowles, S. F., & Greasley, P. (2019). Understanding resilience in young
5 people with complex mental health needs: A Delphi study. *Clinical Child Psychology and*
6 *Psychiatry*, 24(3), 405–416.
- 7 Verreyne, M. L., Ho, M., & Linnenluecke, M. (2018). Editorial for the special issue on:
8 organizational resilience and the entrepreneurial firm. *International Journal of*
9 *Entrepreneurial Behavior & Research*, 24(7), 1122–1128.
- 10 Vogus, T. J., & Sutcliffe, K. M. (2007). Organizational resilience: Towards a theory and research
11 agenda. In *2007 IEEE International Conference on Systems, Man and Cybernetics* (pp.
12 3418–3422). IEEE.
- 13 von der Gracht, H. A. (2012). Consensus measurement in Delphi studies: Review and
14 implications for future quality assurance. *Technological Forecasting and Social Change*,
15 79(8), 1525–1536.
- 16 Wagstaff, C. R. D. (Ed.) (2017). *The organizational psychology of sport: Key issues and*
17 *practical applications*. Routledge.
- 18 Wagstaff, C. R. D., & Burton-Wylie, S. (2018). Organisational culture in sport: A conceptual,
19 methodological and definitional review. *Sport & Exercise Psychology Review*, 14, 32–52.
- 20 Wagstaff, C. R. D., Fasey, K., & Sarkar, M. (2020). Resilience in teams and organizations. In D.
21 Hackfort & R.J. Schinke (Eds.), *The Routledge international encyclopedia of sport and*
22 *exercise psychology: Volume 1: Theoretical and methodological concepts* (pp. 550–564).
23 Routledge.
- 24 Wagstaff, C. R.D., Gilmore, S., & Thelwell, R. C. (2016). When the show must go on:
25 Investigating repeated organizational change in elite sport. *Journal of Change*

- 1 *Management*, 16(1), 38–54.
- 2 Weick, K. E., & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating
3 on flight decks. *Administrative Science Quarterly*, 38(3), 357–381.
- 4 Weick, K.E., Sutcliffe, K.M., & Obstfeld, D. (1999). Organizing for high reliability: Processes of
5 collective mindfulness. *Research in Organizational Behavior*, 21, 81–124.
- 6 Wicker, P., Filo, K., & Cuskelly, G. (2013). Organizational resilience of community sport clubs
7 impacted by natural disasters. *Journal of Sport Management*, 27(6), 510–525.
- 8 Williams, M. (2018). Making up mechanisms in realist research. In N. Emmel, J. Greenhalgh, A.
9 Manzano, M. Monaghan, & S. Dalkin (Eds.), *Doing realist research* (pp. 25–40). SAGE.
- 10 Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017).
11 Organizational response to adversity: Fusing crisis management and resilience research
12 streams. *Academy of Management Annals*, 11(2), 733–769.
- 13 Witmer, H., & Mellinger, M. S. (2016). Organizational resilience: Nonprofit organizations’
14 response to change. *Work*, 54(2), 255–265.

1 Tables

2 **Table 1**

3 *Results of Rounds 1 and 2 Regarding Definitional Aspects of Organizational Resilience in Elite*

4 *Sport*

	Statement	Response – number (percentage of all responses)			
1	Within elite sport, organizational resilience is a reaction to:	significant stressors – 8 (9.8%)	everyday stressors – 1 (1.2%)	both could apply - 69 (84.1%)	neither is relevant - 4 (4.9%)
2	Within elite sport, organizational resilience is a reaction to:	sudden changes - 13 (15.9%)	incremental changes - 4 (4.9%)	both could apply - 62 (75.6%)	neither is relevant - 3 (3.7%)
3	If an elite sport organization has displayed resilience, it has:	absorbed stressors, so experienced disruption then recovered - 12 (14.6%)	deflected stressors, so maintained functioning - 9 (11%)	both could apply - 59 (72%)	neither is relevant - 2 (2.4%)
4	*If an elite sport organization has displayed resilience, it has (select all which apply):				
4a	recovered its former level of performance	agree (round 1) – 47 (57.3%)		disagree (round 1) – 35 (42.7%)	
		agree (round 2) – 35 (49.3%)		disagree (round 2) – 36 (50.7%)	
4b	enhanced its performance	agree (round 1) – 58 (70.7%)		disagree (round 1) – 24 (29.3%)	
		agree (round 2) – 40 (56.3%)		disagree (round 2) – 31 (43.7%)	
4c	adapted and developed new capabilities	agree (round 1) – 70 (85.4%)		disagree (round 1) – 12 (14.6%)	
		agree (round 2) – 59 (83.1%)		disagree (round 2) – 12 (16.9%)	
4d	embarked on a positive, sustainable path	agree (round 1) – 54 (65.9%)		disagree (round 1) – 28 (34.1%)	
		agree (round 2) – 38 (53.5%)		disagree (round 2) – 33 (46.5%)	
5	Within elite sport, organizational resilience is:	a reactive capacity – 6 (7.3%)	a proactive capacity - 6 (7.3%)	both could apply - 70 (85.4%)	neither is relevant - 0
6	If you consider organizational resilience has some proactive element, is this focused towards:	considering and planning for	considering and seeking out	both could apply - 59 (72%)	neither is relevant - 1 (1.2%)

Statement		Response – number (percentage of all responses)			
7	Within elite sport, organizational resilience is concerned with:	problems - 20 (24.4%) reliability and stability - 10 (12.2%)	opportunities - 2 (2.4%) innovation and change - 8 (9.8%)	both could apply - 59 (72%)	neither is relevant - 5 (6.1%)
8	*Organizational resilience is (select all which apply):				
8a	a quality	agree (round 1) – 49 (59.8%)		disagree (round 1) – 33 (40.2%)	
		agree (round 2) - 41 (57.7%)		disagree (round 2) - 30 (42.3%)	
8b	a process	agree (round 1) – 55 (67.1%)		disagree (round 1) – 27 (32.9%)	
		agree (round 2) – 55 (77.5%)		disagree (round 2) – 16 (22.5%)	
8c	an outcome	agree (round 1) – 39 (47.6%)		disagree (round 1) – 43 (52.4%)	
		agree (round 2) – 27 (38%)		disagree (round 2) – 44 (62%)	
9	*Do you think that organizational resilience in an elite sport context is similar or different to organizational resilience in other contexts?	similar (round 1) - 47 (57.3%) similar (round 2) – 51 (71.8%)	different (round 1) - 8 (9.8%) different (round 2) – 7 (9.9%)	it could be both (round 1) - 21 (25.6%) it could be both (round 2) – 12 (16.9%)	I'm not sure (round 1) - 6 (7.3%) I'm not sure (round 2) – 1 (1.4%)
10	*Do you think organizational resilience is similar across an elite sport context, or unique to the particular sport?	similar (round 1) - 40 (48.8%) similar (round 2) – 52 (73.2%)	unique (round 1) - 6 (7.3%) unique (round 2) – 5 (7%)	it could be both (round 1) - 31 (37.8%) it could be both (round 2) – 12 (16.9%)	I'm not sure (round 1) - 5 (6.1%) I'm not sure (round 2) – 2 (2.8%)

1 *Note:* Consensus \geq 65.1%. Consensus responses are in bold. * these statements did not reach
2 consensus after round 1, so were carried forwards to round 2. In round 1, the total number of
3 responses was 82. In round 2, the total number of responses was 71.

1 **Table 2**2 *Resilient Characteristics of Elite Sport Organizations*

Themes	Sub-themes*	Illustrative comments
Structural clarity	Effective internal communication channels (100/2.98); role clarity (100/2.88); transparent decision making (100/2.84); effective external communication channels (96.9/2.59); a flexible or adaptable structure (93.8/2.58)	<p>“For resilient organizations communications and decision making needs to flow rapidly”</p> <p>“high levels of comms between different elements, to allow learning and joint problem-solving”</p> <p>“understanding what others are trying to achieve and [making] communication happen, we achieve much better shared consciousness”</p> <p>“You need to know what your role is and who you report to. You need to know who makes the decisions and what accountability looks like. Boundaries can be important but clear communication channels are more important.”</p> <p>“Every organization needs a structure which is clear internally and externally. Crucially individual role clarity and clarity of responsibility for and across discrete teams is also essential.”</p>
Flexible improvement	Desire to learn and improve (100/2.95); openness to ideas (100/2.77); adaptable /flexible (100/2.77); flexibility of use (95.3/2.64); innovation and creativity (95.3/2.61); accepts uncertainty and change (95.3/2.59); structured training and development program (96.9; 2.58); optimistic (95.3/2.53)	<p>“Adaptability and learning...contribute to capability to interact across multiple levels of the organization”</p> <p>“human resources that are willing and able to adapt to what is available to them”</p> <p>“A shared understanding of individual / department strengths and a willingness to develop them further”</p>
Shared understanding	Shared vision and values (100/2.88); collective efficacy (100/2.77); group norms (98.4/2.66); values unity / integration (95.3/2.55)	<p>“A core set of organizational values adopted and bought into by all so that we ‘live’ them day to day provides a really stable level of resilience.”</p>

Themes	Sub-themes*	Illustrative comments
		<p>“need a strong social identity for collective effort”</p> <p>Stability in clarity of vision helps resilience in times of chaos.</p> <p>“a compelling vision...that attracts, develops and retains passionate employees”</p>
Reciprocal commitment	<p>Employees feel valued (100/2.84); high levels of employee loyalty and commitment (96.9/2.8); effective internal partnerships (96.9/2.78); trusting (100/2.77); supportive (98.4/2.69); psychological safety (98.4/2.66); employee wellbeing prioritized (95.3/2.64); enthusiastic employees (93.8 /2.61); affectionate relationships (90.6/2.52)</p>	<p>“passionate people in caring, trusting relationships are always the basis for resilience. When people get isolated or choose to isolate themselves, then issues can occur.”</p> <p>“reciprocal commitment and investment between members and the organization”</p>
Operational awareness	<p>Anticipate problems early (100/2.8); awareness of priorities in a crisis (98.4/2.69); awareness and understanding of operating environment (98.4/2.66); gathering and considering alternative options (100/2.59); pause and reflect before making decisions (96.9/2.56); awareness of opportunities or resources available (93.8/2.53)</p>	<p>“As a leader it is essential to be aware of both environment and organizational priorities”</p> <p>“foresight, focus on external environment, awareness of changes taking place in the [external] landscape”</p>

- 1 *Note:* *extracted from Delphi survey. Numbers in brackets are firstly the percentage of
- 2 consensus agreement on a characteristic as being very important or somewhat important to
- 3 organizational resilience in elite sport, and secondly the mean ranking from the Delphi survey.