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13   Psychological Resilience in Olympic Medal Winning Coaches:

14   A Longitudinal Qualitative Study

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1   **Abstract**

2   Although there is burgeoning research on resilience in elite athletes, there has been no

3   empirical investigation of resilience in elite coaches. The purpose of this study was to explore

4   psychological resilience in world class coaches and how they develop resilience in athletes. A

5   longitudinal qualitative design was adopted due to the dynamic and temporal nature of

6   resilience. Five Olympic medal winning coaches (4 men and 1 woman) were interviewed

7   twice over a 12-month swimming season. Reflexive thematic analysis was employed to

8   analyse the data. Findings revealed 14 higher-order themes which were categorized into 3

9   general dimensions: coach stressors (managing the Olympic environment, preparation for

10   major events, coach personal wellbeing, directing an organization), coach protective factors

11   (progressive coaching, coaching support network, maintaining work/life balance, secure

12   working environment, durable motivation, effective decision making), and enhancing

13   resilience in athletes (developing a strong coach-athlete relationship, creating a facilitative

14   environment, developing a resilience process, athlete individual factors). The results are

15   presented to demonstrate the interplay between coach stressors and protective factors over

16   time, which offers an original and significant contribution to the resilience literature by

17   providing a unique insight into the dynamic and temporal nature of resilience in Olympic

18   medal winning coaches.

19   *Keywords:* elite sport, high performance coaching, longitudinal qualitative design,

20   protective factors, stressors.

21

1   Psychological Resilience in Olympic Medal Winning Coaches:

2   A Longitudinal Qualitative Study

3   Over the last three decades or so, psychological resilience has been defined and

4 conceptualised by many researchers (Fletcher & Sarkar 2013) with a general consensus that

5 resilience relates to positive adaptation despite the presence of risk or adversity (Fletcher &

6 Sarkar 2013; Luthar, Cicchetti, & Becker 2000). Most recently, psychological resilience has

7 been defined as "the role of mental processes and behavior in promoting personal assets and

8 protecting an individual from the potential negative effect of stressors" (Fletcher & Sarkar,

9 2012, p. 675; 2013, p. 16). This definition extends previous conceptual work in this area in a

10 number of ways. First, the focus on *psychological* resilience delimits the scope of the

11 description, by definition, to "mental processes and behavior" and excludes other types of

12 resilience such as physical, molecular, and structural resilience. Second, this definition

13 encapsulates aspects of both trait and process conceptualisations of resilience (Fletcher &

14 Sarkar, 2012; 2013). Third, the emphasis is placed on the more neutral term "stressor" rather

15 than the negative value-laden term "adversity" (Fletcher & Sarkar, 2013). Fourth, the focus is

16 on "promoting personal assets and protecting an individual from the potential negative effect

17 of stressors" rather than positive adaptation per se, because resilience generally refers to the

18 ability of individuals to maintain normal levels of functioning rather than the restoration or

19 enhancement of functioning (Bonanno, 2004).

20   Within the sport psychology literature, over the past couple of decades or so,

21 researchers have unearthed a wide range of stressors encountered by sport performers.

22 Collectively, the stressors identified in these studies have been associated with competitive

23 performance, the sport organisation within which athletes operate, and personal

24 "nonsporting" life events (Sarkar & Fletcher, 2014). Due to the numerous and variety of

25 stressors encountered by sport performers, researchers have investigated psychological

26 resilience in athletes to understand why some individuals are able to withstand – or even

27 thrive on – the stressors they experience (Bryan, O'Shea, & MacIntyre, 2019; Galli &

1   Gonzalez, 2015).

2   The earliest studies in a sporting context largely centered on resilience in relation to

3   performance failure (Martin-Krumm et al., 2003; Mummery et al., 2004; Seligman et al.,

4   1990). To illustrate, Martin-Krumm et al. (2003) examined the relationship between

5   explanatory style and resilience in a group of recreational basketball players using an

6   experimental approach. Following failure feedback in a dribbling task, optimistic participants

7   were found to be more confident, to be less anxious and to perform better than pessimistic

8   participants. Adopting a more ecologically valid approach, Mummery et al. (2004) explored

9   the impact of three protective factors (viz. self-concept, social support, coping style) against

10   three performance-related outcomes (i.e., initially successful performance; resilient

11   performance involving an initial failure followed by subsequent success; non-resilient

12   performance involving an initial failure followed by subsequent failure) in a National

13   swimming championship. Findings revealed that resilient performers had higher self-

14   perceptions of physical endurance but lower perceptions of social support than the other two

15   groups. Moreover, the initially successful performers had higher perceptions of peaking

16   under pressure and coping with adversity than the other groups. Although early work in this

17   area provided an initial insight into resilience in sport performers, it is worth noting that the

18   research focused on a limited number of psychological characteristics (viz. optimistic

19   explanatory style, self-concept, social support, coping style) that precluded participants from

20   providing a broader insight into the trait and process elements of resilience.

21   Taking a more holistic approach to resilience inquiry, Galli and Vealey (2008)

22   interviewed college and professional athletes' about their perceptions and experiences of

23   resilience using Richardson (2002) and colleagues' (1990) resiliency model as a guiding

24   theoretical framework. Five general dimensions emerged that described the resilience

25   experience of the athletes. These dimensions included breadth and duration, agitation,

26   sociocultural influences, personal resources, and positive outcomes. A drawback of the study

27   was that it was driven by Richardson et al.'s model, which is a particular concern since it has

1   various limitations including the linear stage framework evident within its structure, the

2   absence of meta-cognitive and meta-emotive processes, and its bias toward coping-oriented

3   processes (Fletcher & Sarkar, 2013).

4   In an attempt to address the limitations of Galli and Vealey's (2008) work, researchers

5   (Fletcher & Sarkar, 2012; White & Bennie, 2015) have employed inductive qualitative

6   designs to explore resilience free from the constraints of a preconceived model. To illustrate,

7   Fletcher and Sarkar (2012) developed a grounded theory of psychological resilience in

8   Olympic champions. They interviewed twelve Olympic gold medallists to explore and

9   explain the relationship between psychological resilience and optimal sport performance. The

10   findings revealed that numerous psychological factors (relating to a positive personality,

11   motivation, confidence, focus, and perceived social support) protected the world's best

12   athletes from the potential negative effect of stressors by influencing their challenge appraisal

13   and meta-cognitions. These constructive cognitive reactions promoted facilitative responses

14   that led to the realization of optimal sport performance. Interestingly, it was observed that

15   coaches played an important role in athletes' resilience and thus, Fletcher and Sarkar (2012)

16   noted that "future research . . . should consider the perception of significant others

17   surrounding these athletes, such as coaches" (p. 676).

18   In one of the few sport-related resilience studies to date to sample coaches, White and

19   Bennie (2015) recently investigated gymnast and coach perceptions about the development of

20   resilience through gymnastics participation. Underpinned by a qualitative design, 22 female

21   gymnasts and seven gymnastic coaches participated in semi-structured interviews. Data

22   analysis revealed that aspects of the gymnastics environment created stress and exposed

23   gymnasts to many challenges in training and competition. Features of the sport environment,

24   such as interpersonal relationships and positive coach behaviours, supported gymnasts

25   through these challenges and encouraged them to overcome failure. Gymnastics participation

26   was perceived to develop resilience, as well as life skills, self-efficacy, and self-esteem.

27   Importantly, White and Bennie (2015) noted that "the community gymnastics sample meant

1   that the findings might not to wholly applicable to . . . athletes from other sports. As such,

2   future research needs to be conducted in diverse sporting contexts" (p. 390).

3   Although there is burgeoning research on psychological resilience in elite athletes

4   (Bryan et al., 2019; Galli & Gonzalez, 2015), to date, there has been no empirical

5   investigation of resilience in elite coaches. Indeed, when discussing implications for future

6   research, Sarkar and Fletcher (2016) noted:

7   Since elite sport coaches operate within complex, ever-changing environments that

8   impose many pressures on them (see, for a review, Fletcher & Scott, 2010), future

9   research should examine resilience in elite coaches. Specifically, due to the

10   exploratory nature of this emerging area of inquiry, researchers should initially . . .

11   strive to understand . . . resilience amongst coaches and how this impacts their ability

12   to foster resilience in their athletes (pp. 241-242).

13   The purpose of this study is, therefore, to explore psychological resilience in world

14   class coaches and how they develop resilience in athletes. In order to meet this objective, a

15   longitudinal qualitative design will be adopted due to the dynamic and temporal nature of

16   resilience (Egeland, Carlson, & Sroufe, 1993; Luthar et al., 2000). It is hoped that this study

17   will offer an original and significant contribution to the resilience literature by providing a

18   unique insight into how resilience unfolds over time in Olympic medal winning swimming

19   coaches.

20   **Method**

21   **Research Design**

22   This study was deemed best suited to qualitative methods in view of the scant

23   knowledge of psychological resilience in elite coaches. As Bonanno (2012) asserted,

24   "qualitative studies of putatively resilient samples . . . provide a valuable source of new ideas

25   and information, especially in populations that have not yet benefitted from systematic study"

26   (p. 755). Qualitative methods are also particularly appropriate for better understanding the

27   complexity of psychosocial phenomena (Silverman, 2006), such as resilience in the context

1 of elite sport coaching. Indeed, qualitative researchers in this area have stated that such an

2 approach can account for the specific context in which resilience is manifested (Ungar,

3 2003). In terms of an underpinning philosophical orientation to this study, we develop

4 knowledge through a process of interpretation (i.e., epistemologically interpretivist) and

5 believe in retaining a balanced outlook (i.e., ontologically realist).

6   A longitudinal qualitative design (Hermanowicz 2013) was employed to better

7 understand how resilience unfolds over time (Egeland et al., 1993; Luthar et al., 2000).

8 Specifically, coaches' resilience was explored via interviews at two specific time points

9 (September and April) over a 12-month swimming season. These specific time points were

10 chosen since they are significant within the swimming coaching yearly calendar. These time

11 points were September 2016, post-Olympic season, and just prior to World Championship

12 selection trials in April 2017. It was hoped that conducting interviews over these time points

13 would help to illustrate the dynamic and temporal nature of resilience involving constant

14 anticipation and fine-tuning during adverse conditions. Methodologically, this extends the

15 extant sport resilience literature, which has typically employed single interviews to explore

16 resilience (Galli & Vealey, 2008; Fletcher & Sarkar, 2012; White & Bennie, 2015). Indeed,

17 in their study with athletes, Galli and Vealey (2008) noted that "a major limitation of this

18 study was the use of single interviews . . . Single interviews may not provide the depth of

19 data necessary to adequately draw conclusions regarding a phenomenon. Future qualitative

20 studies of resilience . . . should adopt a longitudinal interview schedule" (p. 330). Similarly,

21 in their study with athletes and coaches, White and Bennie (2015) mentioned that "another

22 limitation was the use of a single interview with each participant. This method did not take

23 into account the dynamic nature of resilience, which may be captured through multiple

24 interviews with the same person. Future researchers should create longitudinal studies on

25 resilience" (p. 390).

26 **Participants**

27   The participants were five elite swimming coaches (4 male, 1 female) who ranged in

1   age from 34 to 65 years (M = 51.2, SD = 11.23). The participants had coached Olympic level

2   swimmers for between four and thirty years (M = 19.2, SD = 9.85). Participants had attended

3   between one and six Olympic games as a coach (M = 3.6, SD = 1.85) and had directly

4   coached between one and five Olympic Medallists (M = 2.4, SD = 1.5). Two of the

5   participants had coached Olympic Champions with the other three having coached Olympic

6   silver medallists. To the best of our knowledge, these were the only five active swimming

7   coaches to coach Olympic Medallists in Great Britain at the time of the study. All coaches

8   had worked as Head Coaches for the National Governing Body (NGB) at some point during

9   their career. At the time of the study, two were Head Coaches for the NGB and three were

10   Head Coaches in a club-based setting. Participants own swimming level ranged from

11   Midland District Finalist through to Olympic Finalist level, and all coaches were based in the

12   United Kingdom.

13   **Procedure and Data Collection**

14   Following institutional ethical approval, a database of potential participants were

15   identified using the 'Hall of Fame' information available from the British Swim Coaches'

16   Association, and contact details for each potential participant was acquired. Potential

17   participants were subsequently contacted by email. This correspondence informed them of

18   the purpose of the study, what it entailed for participants, and invited them to participate in

19   two interviews over a 12-month swimming season. All of the potential participants agreed to

20   the invitation and were contacted to arrange a mutually convenient time and location to meet.

21   All of the participants provided informed consent before the start of data collection.

22   Semi-structured interviews were conducted face-to-face by the second author. Due to

23   the longitudinal nature of the study (Hermanowicz, 2013), two interview guides were

24   developed. Interview guides were developed in advance to help the interviewer explicitly

25   think about what might be covered in the interview to facilitative the interview process

26   ultimately to better understand the participants' subjective experiences (Patton, 1990, 2002).

27   The interview guides did not represent a rigid document, but rather a flexible set of

1   evolutionary questions depending on the direction taken by the participant during the course

2   of the discussion (Silverman, 2006). All of the interviews involved asking a series of open-

3   ended questions and adopted a conversational tone.

4   **Interview one.** The first semi-structured interview guide was constructed with five

5   sections focusing on background information, coaching pressures/setbacks/adversities,

6   coaches' personal resilience, developing resilience in athletes, and practical suggestions for

7   aspiring elite coaches. Specifically, the interview began by asking participants about their

8   career background (e.g., "I was wondering if you could tell me about your coaching career to

9   date and your proudest moment as a coach?"). The coaches were then asked about

10 pressures/setbacks/adversities they had faced (e.g., "could you describe sport-related

11 pressures that you have experienced in the last few months?"). The focus of the interviews

12 then shifted toward the participants' perceptions of the qualities they felt had enabled them to

13 withstand the stressors of elite sport coaching (e.g., "what characteristics do you think helped

14 you to withstand the pressures you have encountered in the last few months?"), and toward

15 coaches' experiences of developing resilience in athletes (e.g., "can you explain what type of

16 environment you have created in the last few months to help athletes deal with pressure?").

17 Lastly, the guide concluded with several questions designed to elicit advice for aspiring elite

18 coaches (e.g., "how would you advise aspiring elite coaches to view and deal with pressure in

19 relation to their coaching?").

20   **Interview two.** In line with the purpose of the present study, the second semi-

21 structured interview guide focused on three of the five sections in the first interview, namely

22 coaching pressures/setbacks/adversities, coaches' personal resilience, and developing

23 resilience in athletes. Hermanowicz (2013) noted that there are two means to structure

24 interview protocols in longitudinal qualitative research either posing the same questions on

25 the same themes or posing different questions on selected same and newly emergent themes.

26 The former approach was adopted in the present study since "LQIs [longitudinal qualitative

27 interviews] designed *in advance* lend themselves to protocols containing identical questions

1 posed to respondents at different times in order to assess change [over time]" (p. 198). To

2 supplement this process, clarification (e.g., "I'm not sure exactly what you meant, could you

3 please go over that again?"), elaboration (e.g., Could you please explain that in more

4 detail?"), and general (e.g., "What effect did that have?") probes were used to further explore

5 the surfacing data (Patton, 2002) and to build on data collected during the first interview.

6 **Data Analysis**

7   The interviews, which ranged in duration from 42 to 86 minutes (M= 58.7**,** SD= 17.7)

8 were digitally recorded in their entirety and transcribed verbatim, yielding 210 pages of

9 single spaced text. The transcripts were analysed using the reflexive thematic analysis

10 procedures outlined by Braun and Clarke (2006; 2016; Braun, Clarke, & Weate, 2016;

11 Clarke & Braun, 2014). First, to become familiar with the data, the transcripts were read and

12 reread, and brief notes were recorded to create some preliminary ideas for the next phase of

13 the analysis. Second, codes of interest were generated by extracting and collating pertinent

14 excerpts of the data. Third, all of the codes were organised into potential themes that

15 reflected the content and meaning of the data. Fourth, the themes were reviewed and refined

16 in relation to the generated codes and the entire data set. Fifth, the themes were labelled and

17 defined by attempting to capture the essence of the data it contained. Sixth, compelling

18 extracts were selected to relate the analysis back to the research question. Throughout this

19 process, in line with and due to the longitudinal nature of the study (Hermanowicz, 2013),

20 the approach of constant comparison was used (Charmaz 1990; Glaser & Strauss 1967;

21 Strauss & Corbin 1994). Specifically, using an inductive and deductive approach, themes

22 were elaborated or modified through further data collection and analysis (i.e., from the

23 second interview). Furthermore, to explore change over time, following Saldana's (2003)

24 recommendations for longitudinal qualitative research, a variety of conceptual and thematic

25 questions were employed to help situate data analysis (e.g., what remains constant or

26 consistent with time? What is idiosyncratic through time? Which changes interrelate through

27 time? What are participant rhythms through time?).

1 **Methodological Quality and Rigor**

2   Although some scholars have opposed the development of unvarying universal

3 standards for qualitative research (Sparkes & Smith, 2009; Smith & McGannon, 2018), it is

4 important to assess the quality of a study using evaluative criteria most appropriate for the

5 research question and generated data (Roulston, 2010). Judging the quality of the findings

6 was realised in this study through five main criteria or approaches (Smith & McGannon,

7 2018; Tracy, 2010). First, to achieve rich rigour, the study used appropriate and well-

8 established data collection and analysis procedures, and provides abundant rich data from

9 significant and distinctive participants. Second, in accordance with the researchers'

10 ontologically realist beliefs, sincerity was realized through reflexivity about the potential

11 subjective biases and transparency associated with the methods. Specifically, the second

12 author (Director of Coaching at a local swimming club) maintained a field log throughout all

13 phases of data collection and analysis, and a clear account of the research process was

14 recorded and reported to ensure that the reader can understand how the study was conducted.

15 Third, to evaluate the credibility of the analysis, a "critical friend" was adopted to enable the

16 researchers to think critically about the thematic structure being developed. This critical

17 friend was an academic colleague who had approximately eight years of experience as a

18 qualitative researcher and a competing and coaching background in elite swimming.

19 Importantly, rather than being adopted to achieve agreement or to reach consensus, a critical

20 friend was used to encourage alternative explanations and interpretations of the data (Smith

21 & McGannon, 2018). Forth, resonance was achieved through the transferability of the

22 findings, specifically by reporting direct quotations from participants, providing rich

23 description, and writing accessibly (Ungar, 2003). Finally, the research considered both

24 procedural and relational ethics (Tracy, 2010). Specifically, the American Psychological

25 Association's (2010) Ethical Compliance Checklist was completed, and consistent with the

26 researchers' epistemologically interpretivist beliefs, the mutual connectedness between the

27 researcher and participant was valued.

1   **Results**

2   The results derived from data analysis procedures represent the collated interview

3   responses from all five Olympic Medal winning coaches. The interview data yielded 14

4   higher-order themes, which were categorized into three general dimensions: coach stressors,

5   coach protective factors, and enhancing resilience in athletes (see Table 1). Drawing directly

6   from the experiences of the participants across the two interviews, each general dimension

7   will be illustrated by direct quotations from the transcripts with the aim of providing an

8   insight into how resilience unfolded over a 12-month swimming season in world class

9   coaches.

10   **Coach Stressors**

11   Four higher order themes were identified in this dimension: Managing the Olympic

12   environment, preparation for major events, coaches' personal well-being, and directing an

13   organisation.

14   **Managing the Olympic environment.** This higher order theme included 14 initial

15   data codes, which were grouped into two lower order themes (failure as an athlete at the

16   Olympic Games or trials, and failure/stress whilst at the Olympic Games or trials). Managing

17   the Olympic environment described the pressures associated with qualifying for, or

18   competing at, the Olympic Games as described in the following quote from Coach 2.

19   But certainly it's a bit more stressful going to trials then going to the Olympic Games.

20   The Olympic Games I felt relaxed, I felt I was at ease. I felt I belonged there and loved

21   it. And I think my swimmers got that from me as well. [Interview 1, September 2016,

22   Coach 2].

23   When asked to describe the sport-related pressures they had experienced in the last few

24   months, in the second interview, Coach 2 provided a different response focusing on the

25   stressors associated with working at a national centre/governing body, highlighting the need

26   for different protective factors during different periods in time.

27   I mean it's hard to get my head round anything, with the big restructure. It really is. I

1   mean, if I'm honest, you know how I said part of it is like, yeah, but it is all about the

2   Olympics and we have done really well and, maybe, I'm not as hungry in that as I

3   should be, even myself. I had a conversation with some of them and even me was, like,

4   well we'll see how it goes and I would always be, like, the Worlds are coming up, but

5   I'm a bit like, yeah, it is about the Olympics and there's four years in between and it is

6   a Worlds, but it's not the Olympics. So it's part of it, for the first time – and I'm not

7   sure if it's a good thing – I'm actually thinking, well, yeah, it is what it is. But I don't

8   want to be like that. I want to be really hungry and ready for the next one and I think

9   I'm getting there. I don't think I'm there yet, but I think I'm getting there. But, like I

10   say, you can tell that everything you're saying I've gone through such a big change and

11   it was huge and it's even hard to relate anything past that. [Interview 2, April 2017,

12   Coach 2].

13   **Preparation for major events.** This higher order theme consisted of 15 initial data

14   codes and were grouped into two lower order themes (managing the training process, and

15   demands of the competition process). This higher order theme illustrated the pressures and

16   complexity associated with the long-term preparation for major events as described by coach

17   3, when discussing the preparation/lead up to the Olympic Games:

18   If you look at a coaching point of view, a good example if you look at [Olympian's

19   name], at least she got [an illness]. She's got nearly a year out. She went to the World

20   Championships. I thought she was a stitched on medal in [year of competition]. Swam

21   like a brick. She mispaced it, got it all wrong. So that was a major disappointment, but

22   then 12 months later she went to the Olympics and won two gold medals. It just shows

23   you, you have just got to handle it. [Interview 1, September 2016, Coach 3].

24   **Coach personal wellbeing.** This higher order theme included 19 initial data codes,

25   which were grouped into two lower order themes (Coaches personal life, and demands of a

26   coaching career). This higher order theme focused upon coaches' own personal lives and the

1   pressures associated with elite coaching. The following quote from Coach 1 specifically

2   relates to the coach's inability to switch off:

3   I think my greatest challenge has been and still is – my greatest challenge is confusing

4   my life and my work life as the two being completely one. And I'm a lot better at it

5   than I was, but my moods would depend on how well my swimmers have been going

6   or, you know, it was very much – my mood was very much related to how my work

7   was going, which wasn't healthy. It was okay. It was livable. It was just not – It was

8   just not a sustainable way to live, you know. [Interview 1, September 2016, Coach 1].

9   When probed on his well-being in the second interview, it was evident that Coach 1's

10   perceptions of pressure changed significantly in comparison to his first interview, illustrating

11   the dynamic nature of resilience:

12   Personally, phew, split my head open. Last 6 months, just moving house maybe would

13   be a big deal. That's just not happened yet but it's about to. I've got a bit of a heart

14   tremor, is that stressing me out, no it's not really stressing me out. It's not stressing me

15   out because there's nothing I can do about it. [Interview 2, April 2017, Coach 1].

16   **Directing an organisation.** This higher order theme included 33 initial data codes,

17   which were grouped into three lower order themes (working in a club environment, working

18   at a national centre/governing body, and managing the daily environment). This higher order

19   theme encapsulated the pressures of being a senior manager/coach within an elite coach

20   setting as expressed by Coach 3:

21   "There were big decisions to make, there were big calls to make, but I don't find that

22   any more stressful than some of the decisions you make that affect people's jobs and

23   livelihoods. I mean, part of my role now you know? I have to make some hard calls not

24   just with athletes, but with – with staff. You know so none of those decisions are easy,

25   you know whether it's – whether it's stopping someone's funding. Whether it's

26   changing something at a national centre whether it's not giving the club program

27   money. Whether it's you know sitting there with an athlete, and saying, "Not investible

1　　　anymore." So, there's – there's lots of difficult decisions to make day in and day out.

2　　　But I think you – you know it takes certain mindset to handle and deal with that.

3　　　[Interview 1, September 2016, Coach 3].

4　**Coach Protective Factors**

5　　　Coach protective factors refer to the characteristics or qualities that protected coaches

6　from the potential negative consequences of the stressors they encountered. Six higher order

7　themes were identified in this dimension: Progressive coaching, coaching support network,

8　maintaining work/life balance, secure working environment, durable motivation, and

9　effective decision making.

10　　　**Progressive coaching.** This higher order theme included 25 initial data codes, which

11　were grouped into two lower order themes (coaching behaviours and personality traits). This

12　higher order theme recognised coaches' ability to view pressure/setbacks/adversity in a

13　positive manner coupled with numerous positive personality traits (e.g., optimism,

14　proactivity, conscientious). This is highlighted in the following quote from Coach 4:

15　　　Yeah, just trying to make progress and listen and evaluate things and just, I think it's all

16　　　about progress to me, resilience, how quickly you can turn around disappointment, how

17　　　quickly you can succeed any better through this challenging situation and who you

18　　　become amidst the challenge and that's what I try to do is, every challenge that we do, I

19　　　either try to become better, a better operator or get a better result. [Interview 1,

20　　　September 2016, Coach 4].

21　　　**Coaching support network.** This higher order theme included 12 initial data codes.

22　Coaching support network described the coaches' perceived and received social support from

23　a variety of sources and is reflected in the following quote from Coach 5:

24　　　So I haven't really had a mentor, but what I've had is numerous people that I would

25　　　like to sit down, and discuss it with. Like when I was at [name of town] [sport scientist

26　　　name], when – him and I, every session, and that's ten sessions a week. But year in

27　　　year out, [sport scientist name] and I sat down at the end of each session. And say,

1   "How did that go?" What's the next – now? That's not a mentorship. What that is, is

2   simply understanding did it go as well as I thought it went? What's your opinion,

3   what's your opinion of what's coming next, and whether you take that advice or not is

4   up to you – your choice. [Interview 1, September 2016, Coach 5].

5   In contrast to the first interview, when questioned on similar topics in the second

6   interview, Coach 5 recognised the importance of having a formal mentor but, similar to the

7   first interview, the coach acknowledged having a coaching support network as being an

8   important factor for protection against the potential negative effect of stressors:

9   I think the support mechanism; you need somebody to be able to sound off to. The

10   support mechanism is usually somebody listening to you, somebody giving you advice,

11   and the mentor situation is so important. You say, 'well, look, I did this, and it didn't

12   work?' Then your mentor says, 'at what degrees didn't it work?' You might be on the

13   right track, just not doing enough of it. So, everybody needs somebody to sound off to,

14   because coaches live in isolation, and it's the coach's responsibility, in my opinion, to

15   actually find somebody that will listen to him, can sound off to, and not make a value

16   judgement, but help in judgement. [Interview 2, April 2016, Coach 5].

17   **Maintaining work/life balance.** This higher order theme included 14 initial data

18   codes, which were grouped into two lower order themes (outside interests/hobbies, and

19   controlling the process). This higher order theme recognised coaches' ability to maintain a

20   healthy balance between work and their personal life via engaging in external activities. This

21   is highlighted in the following quote from Coach 1:

22   Yeah. I do quite a lot of voluntary work; four or five times a week sometimes. I keep

23   fit. That's a really big part of my day. Yeah, I am able to go out on walk on – I'm sort

24   of able to do stuff other then maybe the stuff that I used to do. And to switch off, I can

25   jump in to camper van if I want to go away for the weekend. I can, you know, just

26   traveling and driving and camping out, eating, cooking. I find it very easy to switch off

27   from the pool nowadays. It's really – almost too easy. Sometimes I think, you know,

1   sometimes I think, 'Am I losing it?' I am able to walk out of the pool and no matter

2   what's happened – this is not true; I am not telling a lie. Most of the time I can just

3   leave everything where it was whether it was a good session or whether it was a bad

4   session, whereas in the past, I would come out the pool and I would be punching the air

5   or going, 'Yeah,' and calling my missus up and I'll be saying to her, 'Yeah, yeah.' I'd

6   be so up, you know. Or if it was bad, I would come in and be saying he was rubbish

7   and argghh. I just don't do that anymore. [Interview 1, September 2016, Coach 1].

8   When probed around maintaining work/life balance in the second interview, Coach 1

9   provided a different process for withstanding stressors (controlling the process) than detailed

10   in the first interview (outside interests/hobbies), highlighting the need to maintain balance in

11   different ways depending on the time point of the swimming season:

12   My key psychological factor or trick or tool is my daily routine. The daily routine is

13   fool proof. It should, if done correctly, leave you in a good place every day. Look after

14   yourself, healthily, be healthy I should say, do the right thing. Every morning's the

15   same deal with me. I get up, I drink water, I stretch, I write a list. On that list is the

16   things I have to do that day, the things that I would like to do that day and my goal,

17   what am I doing. All those things on a piece of paper and I have things that I will not

18   do that day, for me that's really important . . . and at night I review my day, religiously.

19   I go through my list and if I've not done anything that will carry over to tomorrow but I

20   can throw that list away. By doing that I keep everything in the day. I try never to have

21   any carry over. [Interview 2, April 2017, Coach 1].

22   **Secure working environment.** This higher order theme described a daily work

23   environment that enabled coaches to work effectively under pressure while allowing them to

24   deliver success at the highest level. It included 25 initial data codes, which were grouped into

25   three lower order themes (confidence in the role, working effectively in the coaching

26   environment, and controlling self-doubt). This higher order theme recognised coaches'

27   confidence, their ability to work effectively, and controlling insecurities within the working

1 environment. This is highlighted in the following quote from Coach 4, where she discussed

2 her positive perception of the work environment:

3   "It's really difficult, like I say, at the minute because I just feel like I've faced all my

4   adversities in the last three years in my current job, whereas I feel here I face no

5   problem. When you're in world class sport I feel like nothing's a problem, it's a

6   challenge. How do we find a way forward? So when you're in a club you're dealing

7   with problems. You're dealing with kids that are self-harming. You're dealing with

8   parents that are wanting to knock you out. You're dealing with councils that have got

9   no idea or no care because they are in the same funding category. You're dealing with

10   impossible situations all the time. Here it's not impossible. Everything is possible

11   really. [Interview 2, April 2017, Coach 4].

12   **Durable motivation.** This higher order theme included 25 initial data codes and

13 described coaches' ability to maintain motivation over extended periods of time to enable

14 them to continuously develop themselves to ensure Olympic success was sustained. These

15 codes were then organised into three lower order themes (intrinsic motivation, continual self-

16 development, and extrinsic motivation). This higher order theme described how coaches

17 managed to keep themselves continually motivated even when faced with pressure, setbacks,

18 and adversity. The following quote from Coach 5 illustrates the personal drive and ambition

19 associated with durable motivation:

20   Or is it a vocation. Now, with me it's always been vocation, always. But with some

21   people it – it's nothing more than a job, and if you want to be successful it's – it's – it's

22   whatever it takes. To get results. Whatever it takes. And if you're not prepared to do

23   that than you're not going to get a – a result of the highest level in the world. [Interview

24   1, September 2016, Coach 5].

25   **Effective decision making.** This higher order theme included 13 initial data codes

26 and no lower order themes. This theme described the coaches' ability to self-reflect, analyse,

27 and continually make effective decisions when under pressure. This is highlighted in the

1   following quote from Coach 3:

2   I think you learn from it. You know, how that I used to coach when I was 35 and then

3   how I coach now. Totally different. I think that again that's a trait of more resilient

4   coaches. Because some coaches – coached 30 years. But coached one year thirty times.

5   Whereas, the more resilient coaches from any sport. Learn from the mistakes, and I've

6   made thousands of mistakes don't worry about that, but I've tried not to make them

7   twice. Certainly not the three times. [Interview 1, September 2016, Coach 3].

8   **Enhancing Resilience in Athletes**

9   Four higher order themes were identified in this dimension (developing a strong

10 coach/athlete relationship, creating a facilitative environment, delivering a resilience process,

11 and athlete individual factors). Specifically, this general dimension described how coaches

12 developed relationships with athletes, created a vibrant/positive environment, delivered

13 training to facilitate resilience, and utilised factors that were individual to each athlete.

14   **Creating a facilitative environment.** This higher order theme described how

15 coaches created a challenging and supportive environment that athletes could thrive in as

16 both a person and a performer. In the following quote, Coach 3 discusses the importance of

17 operating in an environment with clear and high expectations:

18   "Well, it's my job in the last four months have been the Olympic Team. So, what

19   we've done is we have – we have a series of behaviours you know? On the team now

20   that I would tell you which we consider to be world class. So, how you conduct

21   yourself, how you think, how you act, how you respond, how you prepare. How you

22   debrief. Everything around the performance with those athletes, coach, support staff,

23   leadership teams. Everything we behave in a certain way. I mean, we have about five or

24   six basic pillars that underpin that, and it's everybody's responsibility to behave in that

25   way. And if they see someone not behaving in that way too – to – to – to police that.

26   Yeah? So, that's the big difference now on the national team. [Interview 1, September

27   2016, Coach 3].

1   **Discussion**

2   Utilising a longitudinal qualitative interview design (Hermanowicz, 2013), this study

3   explored psychological resilience in world class coaches and how they developed resilience

4   in athletes. The findings revealed 14 higher-order themes which were categorized into three

5   general dimensions: coach stressors (managing the Olympic environment, preparation for

6   major events, coach personal wellbeing, directing an organization), coach protective factors

7   (progressive coaching, coaching support network, maintaining work/life balance, secure

8   working environment, durable motivation, effective decision making), and enhancing

9   resilience in athletes (developing a strong coach-athlete relationship, creating a facilitative

10   environment, developing a resilience process, athlete individual factors).

11   **Coach Stressors**

12   Four higher order themes were identified in this general dimension, namely managing

13   the Olympic environment, preparation for major events, coaches' personal well-being, and

14   directing an organisation. Although several authors have identified and explored the stressors

15   associated with coaching and elite sport coaching in particular (Fletcher & Scott 2010; Frey,

16   2007; Olusoga et al., 2009, 2010, 2012, Thelwell et al., 2008a, 2008b, 2010), none have

17   examined these stressors over a longitudinal time period. Indeed, the current study found that

18   additional stressors became apparent over time especially during intense periods of prolonged

19   pressure, such as selection trials or the Olympic Games itself. Thelwell et al. (2008a)

20   categorised elite coach stressors into six general dimensions, which were balanced between

21   performance- and organisational-related stressors. Olusoga et al. (2009) conducted further

22   research into stressors associated with world class coaches. Specifically, they identified ten

23   higher order themes, which similarly found performance- and organisational-related stressors

24   that coaches regularly experience. Whilst these studies identified these particular pressures,

25   they did not identify personal demands that are frequently encountered by coaches. Thus, the

26   current study supported previous findings within these studies (Olusoga et al., 2009; Thelwell

27   et al., 2008a) whilst also identifying new areas such as the higher order theme of coaches'

1   personal wellbeing. Although personal stressors have been identified as a common demand

2   encountered by athletes (Sarkar & Fletcher, 2014), they have yet to be identified and

3   explored in elite coaches. Thus, the current study extends previous observations by

4   identifying an inability to maintain personal wellbeing as a pertinent stressor in world class

5   coaches.

6   **Coach Protective Factors**

7   Six higher order themes were identified in this general dimension, namely progressive

8   coaching, coaching support network, maintaining work/life balance, secure working

9   environment, durable motivation, and effective decision making. Although numerous factors

10 that protect individuals' from the potential negative effect of stressors have been investigated

11 in athletes (Galli & Vealey, 2008; Fletcher & Sarkar, 2012), the current study is the first to

12 explore and identify protective factors in (world class) coaches.

13   The higher order theme of progressive coaching encompassed a wide range of coaching

14 behaviours and personality traits, such as openness to learning, conscientiousness, optimism,

15 and proactivity. These findings support previous research with successful Olympic (Mallett

16 & Coulter, 2016) and serial winning coaches (Mallett & Lara-Bercial, 2016). The higher

17 order theme of coaching support network recognises the importance of social support as a

18 crucial factor, which protects coaches from the potential negative effects of stressors.

19 Interestingly, while perceived social support has been identified as an important factor

20 underpinning resilience in elite athletes (Fletcher & Sarkar, 2012), coaches interviewed in

21 this study valued both perceived and received support when dealing with pressure, setbacks,

22 and adversity. Maintaining work/life balance was considered to be an essential factor in

23 buffering coaches from the stressors they experienced. Olusoga et al. (2010) recognised

24 "distraction" as a theme in their research into stress and coping in world class coaches. The

25 current study extended this further and provided additional longitudinal insights into how

26 maintaining work/life balance provides coaches with protection from stressors over time,

27 with the need to maintain balance occurring in different ways (e.g., by having outside

1   interests/hobbies vs. controlling the everyday coaching process) depending on the time point

2   of the season.

3   Having a secure environment was identified as an important protective factor in

4   Olympic medal winning coaches. Specifically, the participants suggested that having

5   confidence in their role, working effectively in the coaching environment, and controlling

6   self-doubt offered a secure working environment that, in turn, provided a platform to

7   withstand stressors. This supports the notion of the "greenhouse effect" (Lara-Bercial &

8   Mallett, 2016) whereby key features of the environment (e.g., personnel, resources,

9   schedules, relationships) and the motivational climate remain relatively stable so staff and

10 athletes can concentrate on doing their job to the best of their ability under pressure. Durable

11 motivation described coaches' ability to have a continuous stable drive towards their goals,

12 with minimal fluctuation, even when faced with pressure/setbacks/adversity. Specifically,

13 being driven by multiple intrinsic (e.g., searching for learning opportunities, exposure to

14 challenging environments) and extrinsic (e.g., winning Olympic medals, being paid a fair

15 salary) motives appeared to protect coaches from negative consequences. Lastly, coaches

16 believed that effective decision making was crucial for them to withstand pressure. This

17 supports the study conducted by Mallett and Lara-Bercial, (2016) focused on serial winning

18 coaches, with findings suggesting that the key skills for the coaches to succeed were effective

19 communication, planning and decision making with particular reference made to serial

20 winning coaches being able to 'see the bigger picture', and making necessary decisions. To

21 the best of the authors' knowledge, research into the role of effective decision making as a

22 protective factor has not been fully examined yet in the sport resilience literature and hence,

23 it could make for an interesting avenue for future investigation.

24 **Enhancing Resilience in Athletes**

25   This final general dimension had four higher order themes (developing a strong

26 coach/athlete relationship, creating a facilitative environment, developing a resilience

27 process, and athlete individual factors). The current study identified that world class coaches

1   develop a robust and collaborative relationship with their athletes when developing

2   psychological resilience for long-term achievement. Research by Mallett and Lara-Bercial

3   (2016) recognised that whilst collaborative coach-athlete relationships have been reported in

4   elite sport (Hodge, Henry, & Smith 2014), this style of leadership has not been frequently

5   cited when considering successful performance under pressure at the world class level.

6   Coaches also identified that creating a facilitative environment enhanced athletes' ability to

7   withstand stressors. This supports the proposition by Fletcher and Sarkar (2016) that a high

8   challenge-high support (facilitative) environment is optimal for developing resilience in

9   performers (Sarkar, 2018), as well as supporting research by Lara-Bercial and Mallett (2016)

10   who noted that a challenging training environment with a certain level of stability and

11   dependability was fundamental to sustained success. The current study has also provided

12   further areas for consideration when attempting to facilitate a holistic and systematic

13   approach to enhancing psychological resilience in athletes. Specifically, athlete individual

14   factors were described as a key element in developing resilience, such as experiencing

15   repeated failure, and learning and from adversity (Sarkar & Fletcher, 2017a; Sarkar, Fletcher

16   & Brown, 2015).

17   **Strengths and Limitations**

18   When interpreting the findings of an investigation of this kind, it is important to

19   recognise some of the strengths and limitations. In our view, a major strength of this study is

20   the make-up of the sample specifically the supra-elite nature of the participants. Specifically,

21   the coaches who participated in the interviews were Olympic medal winning coaches who

22   had substantial experience of positively adapting to pressure/setbacks/adversity at numerous

23   points during their coaching career. Indeed, it has been suggested that the study of significant

24   samples (i.e., participants who are distinguished in some way) greatly enriches psychological

25   science (Simonton, 1999). Due to the dynamic and temporal nature of resilience (Egeland et

26   al., 1993; Luthar et al., 2000), another strength of this study, in our view, is the longitudinal

27   qualitative interview design (Hermanowicz, 2013). The nature of this design enabled unique

1   insights to be gleaned into how resilience unfolded over time. Specifically, it allowed for an

2   examination of the dynamic nature of coaches' thoughts, feelings, and behaviours throughout

3   the process of dealing with pressures/setbacks/adversities (Galli & Vealey, 2008).

4   Methodologically, this extends the extant sport resilience literature, which has typically

5   employed single interviews to explore resilience (Galli & Vealey, 2008; Fletcher & Sarkar,

6   2012; White & Bennie, 2015).

7   Notwithstanding these strengths, a potential drawback of the study is the limited

8   characteristics of the sample in terms of sport, culture, and gender. Specifically, all coaches

9   were solely from swimming, were all based in the United Kingdom, and were predominantly

10   male. Furthermore, although the longitudinal qualitative interview design was considered a

11   strength of a study, a potential limitation could be the limited period of investigation (i.e.,

12   two interviews over a 12-month season). Future researchers should explore resilience in

13   Olympic coaches with multiple (i.e., 3 or 4) interviews over a longer time period (e.g., a 4

14   year Olympic cycle) to better understand the dynamic and temporal nature of resilience.

15   **Future Research**

16   The findings reported here suggest that resilience in elite coaches is likely to be a

17   fruitful avenue for researchers to explore. Here, we discuss three main areas that we believe

18   will advance knowledge in this area. First, there is a need for more large-scale longitudinal

19   studies (Bryan et al., 2019; Galli & Gonzalez, 2015). Qualitative research involving multiple

20   contact points and methods of data collection will further elucidate the process of resilience

21   in coaches. In addition, quantitative research, using advanced statistical modelling techniques

22   (e.g., structural equation modelling, latent growth mixture modelling) will allow researchers

23   to explore resilience pathways and trajectories in elite coaches. A recent development in the

24   study of resilience in general psychology is the introduction of two different resilience

25   trajectories (i.e., emergent and minimal-impact; Bonnano & Diminich, 2013). Specifically,

26   emergent resilience refers to a gradual movement toward healthy adjustment following a

27   period of struggle with chronically aversive circumstances whereas minimal-impact

1   resilience refers to a stable trajectory of healthy adjustment following an isolated adversity,

2   with recovery as a gradual return to baseline. Sport researchers might consider employing

3   these different trajectories to better understand the exact nature of resilience by tracking

4   relevant indicators of resilience over time, both before and after adversity (Bonanno, 2012;

5   Bonnano & Diminich, 2013).

6   Second, while this study focused on psychological resilience in world class coaches

7   and how they develop resilience in athletes, there is a need to investigate coaches' impact on

8   resilience in teams (Morgan, Fletcher, & Sarkar, 2013; 2015; 2017; 2019). Coaches play a

9   pivotal role in influencing team resilience particularly in relation to transformational and

10   shared leadership, devising team learning strategies, and cultivating a distinctive social

11   identity (Morgan et al., 2015; 2017; 2019).

12   Third, to advance knowledge of developing resilience, resilience intervention studies

13   are needed in sport (Sarkar & Fletcher, 2016). Although there has been a burgeoning interest

14   in resilience training interventions in the workplace (Robertson, Cooper, Sarkar, & Curran,

15   2015; Sarkar & Fletcher, 2017b), some of which have focused on coaching (Grant, Curtayne,

16   & Burton, 2009; Sherlock-Storey, Moss, & Timson, 2013), no resilience intervention studies

17   to date have been devised and reported in sport with coaches.

18   **Practical Implications**

19   In terms of the praxis of this investigation, there are a number of practical

20   implications of the findings and themes presented. Overall, due to the ever-changing nature

21   of psychological resilience, sport psychologists and national sport organisations should

22   explore the need for coaches to receive education and support regarding stressors, protective

23   factors, and enhancing resilience in athletes. In terms of stressors, sport organisations should

24   be cognizant around the number and variety of stressors that world class coaches experience

25   particularly where psychosocial education (e.g., leadership training to help with the demands

26   of directing an organization) and external support (e.g., counselling to help with the demands

27   of coaches' personal wellbeing) may be required.

1   In terms of protective factors, sport psychologists should identify and monitor the

2   factors (i.e., progressive coaching, coaching support network, maintaining work/life balance,

3   secure working environment, durable motivation, effective decision making) that an elite

4   coach needs to exhibit resilience. Importantly, due to the interplay between coach stressors

5   and protective factors over time, it is crucial that sport psychologists determine which

6   particular protective factors match best with certain stressors (e.g., maintaining work/life

7   balance to help with coaches' personal wellbeing), and psychologists should also intervene to

8   attain the optimum levels of, and balance between, these factors (Sarkar & Fletcher, 2014).

9   In terms of enhancing resilience in athletes, sport psychologists should work with

10   coaches in creating environments that people can thrive in as both a person and a performer.

11   Specifically, based on the findings of the current study, the environment should be

12   characterised by individuals seeking out challenges to develop, good relationships between

13   performers and coaches, a psychologically safe environment that encourages sensible risk-

14   taking, and learning from mistakes and failures (Fletcher & Sarkar, 2016). Interestingly, how

15   coaches balance this creation of a facilitative environment versus unconsciously cultivating

16   an unrelenting environment (e.g., coaches exposing and ridiculing under performers, a blame

17   culture when high standards are not met, an avoidance mentality due to the consequences of

18   making mistakes, and little care for well-being) needs to be further explored (Sarkar, 2018).

19   **Conclusion**

20   Although there has been burgeoning research on psychological resilience in elite

21   athletes, to date, there has been no empirical investigation of resilience in elite coaches.

22   Utilising a longitudinal qualitative interview design (Hermanowicz, 2013), this study

23   explored psychological resilience in Olympic medal winning coaches and how they

24   developed resilience in athletes. The findings revealed 14 higher-order themes which were

25   categorized into three general dimensions: coach stressors (managing the Olympic

26   environment, preparation for major events, coach personal wellbeing, directing an

27   organization), coach protective factors (progressive coaching, coaching support network,

1   maintaining work/life balance, secure working environment, durable motivation, effective

2   decision making), and enhancing resilience in athletes (developing a strong coach-athlete

3   relationship, creating a facilitative environment, developing a resilience process, athlete

4   individual factors). This is the first empirical investigation of resilience in elite coaches and

5   the study provides an original and significant contribution to the resilience literature by

6   providing a unique insight into how resilience unfolds over time in world class coaches, with

7   a number of practical implications for sport psychologists and national sport organisations.

8   Nonetheless, the body of knowledge in this area remains at a nascent stage so the research

9   opportunities to explore resilience in coaches are vast and the possibilities for influencing

10   applied/coaching practice are exciting.

11

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General Dimension	Higher-order themes
	Managing the Olympic environment
	Preparation for major events
Coach stressors	Coach personal wellbeing
	Directing an organization
	Progressive coaching
	Coaching support network
	Maintaining work/life balance
Coach protective factors	Secure working environment
	Durable motivation
	Effective decision making
	Developing a strong coach-athlete relationship
	Creating a facilitative environment
Enhancing resilience in athletes	Developing a resilience process
	Athlete individual factors

Table 1: Three general dimensions and fourteen higher-order themes