

1 **The personal meanings and experiences of resilience amongst elite badminton athletes**
2 **in the build up to competition**

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4 **Abstract**

5 The concept of resilience has a wide theoretical framework with a growing body of research
6 addressing resilience in sport. With competitive athletes experiencing multiple stressors and
7 adversities throughout their sporting careers, it is important to further understand resilience
8 within a sporting context. The aim of this study was to explore elite athletes' personal
9 meanings and experiences of resilience in the build up to competition in the sport of
10 badminton. Six professional badminton players were interviewed and interpretive
11 phenomenological analysis was adopted to analyse the qualitative data. Four themes
12 emerged: (1) An optimistic appraisal of pressure as integral to resilience; (2) Shift from
13 negative emotional state to acceptance; (3) Striking a balance between life and sport; and (4)
14 A quality relationship between coach and athlete facilitating optimal performance. The
15 findings have implications for sport professionals who work closely with elite athletes aiming
16 to foster resilience and improve performance.

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20 *Keywords:* sport performance, qualitative, excellence, stress, resilient characteristics

21
22 **Introduction**

23 The build up to, and participation within an important sporting competition is a period
24 in which an athlete is likely to encounter multiple stressors and adversities (Gould &
25 Maynard, 2009; Tamminen, Holt & Neely, 2013; Sarkar & Fletcher, 2014). Recent research
26 has begun to examine athletes' experiences of stress both qualitatively and quantitatively
27 across multiple sports. Studies suggest that certain common sources of stress can be identified
28 including; the pressure to perform at an excellent standard, worries about training and
29 competition settings, lack of confidence and fear of under-performance, worries about
30 injuries, challenges in the coach-athlete relationship and balancing personal commitments
31 inside and outside of sport (Anshel & Anderson, 2002; Kaiseler, Levy, Nicholls & Madigan,
32 2017; McKay, Niven, Lavalley & White, 2008; Myers, Ntoumanis, Gunnell, Gucciardi &
33 Lee, 2017; Nicholls, Levy, Carson, Thompson & Perry, 2016; Thelwell, Weston &
34 Greenlees, 2007).

35 The stressors experienced by athletes in the build up to competitions may include
36 personal, relational, environmental or situational influences (Gould & Maynard, 2009). While
37 research has pointed to the importance of managing stress in attaining high level sporting
38 performance (Gould & Maynard, 2009; Gustafsson, Sagar & Stenling, 2017; Nicolls et al,
39 2016), an emerging body of work has sought to specifically investigate resilience in elite
40 sporting athletes (Sarkar, 2017; Fletcher & Sarkar, 2012; 2016; Sarkar & Fletcher, 2013;
41 2014; 2016; Morgan, Fletcher & Sarkar, 2013; Wagstaff, Sarkar, Davidson & Fletcher,
42 2016).

43 The concept of resilience has a wide theoretical and conceptual framework as both a trait
44 and a process (Fletcher & Sarkar, 2013). When conceptualised as a trait, resilience has been
45 defined as “the positive role of individual differences in people’s response to stress and
46 adversity” (Rutter, 1987, p.316). Resilience conceptualised as a dynamic process is identified

47 as a changing and adapting ability which develops over time in the context of the individuals'
48 biopsychosocial experiences (Luthar, Cicchetti & Becker, 2000; Richardson, 2002; Wu et al.,
49 2013). Contemporary resilience research in a sporting context has advanced this definition to
50 encapsulate features of both trait and process conceptualisations defining resilience as “the
51 role of mental processes and behaviour in promoting personal assets and protecting an
52 individual from the potential negative effect of stressors” (Fletcher & Sarkar, 2012, p. 675;
53 2013, p. 16).

54 In defining resilience there is a specific focus on the individuals' protection from the
55 negative effect of stressors rather than a positive coping response or adaptation to adverse
56 circumstances. This definition suggests that resilience and coping are conceptually distinct
57 constructs, specifically “resilience is characterised by its influence on one's appraisal prior to
58 emotional and coping responses and by its positive, protective impact, whereas coping is
59 characterised by its response to a stressful encounter and by its varying effectiveness in
60 resolving outstanding issues” (Fletcher & Sarkar, 2013, p.16). Resilience is the maintenance
61 of normal functioning throughout stressful experiences, while coping is the response to stress
62 when normal functioning cannot be maintained without effort.

63 There has been a growing body of work in the last decade that has explored the concept
64 of resilience within a sporting context (Fletcher & Sarkar, 2012; Galli & Vealey, 2008;
65 Machida, Irwin & Feltz, 2013; Morgan, Fletcher & Sarkar, 2013; 2015; Martin-Krumm,
66 Sarrazin, Peterson & Famose, 2003; Mummery, Schofield & Perry, 2004). These studies have
67 researched resilience in competitive sport, however, only three studies have used a sample of
68 elite athletes (Fletcher & Sarkar, 2012; Fletcher & Sarkar, 2013; 2014; Morgan, Fletcher &
69 Sarkar, 2013). In one of the first studies to investigate resilience in elite athletes, Fletcher and
70 Sarkar (2012) interviewed twelve Olympic gold medallists to examine the relationship

71 between resilience and optimal sport performance. They found that multiple psychological
72 factors shielded these athletes from the possible negative effect of stressors by influencing
73 their challenge appraisal and meta-cognitions. These psychological factors included positive
74 personality, motivation, confidence, focus, and perceived social support (Fletcher & Sarkar,
75 2012). A significant finding to emerge from this study was the athletes' changing appraisals
76 of challenging situations. When experiencing stressors, particularly in highly pressurised
77 performance environments, the Olympic athletes appear to reflect on their initial negative
78 appraisal of the stressor and further evaluate the consequential emotion as having the
79 potential to facilitate their performance (Fletcher & Sarkar, 2012; Sarkar, 2017).

80 In their investigation of team resilience, Morgan et al. (2013) conducted focus groups
81 with five elite teams from a range of sports to examine how they positively adapt to adversity
82 as a cohesive group. Their findings revealed that elite sport teams shared four significant
83 characteristics including group structure, mastery approaches, social capital, and collective
84 efficacy. They found that the quality of relationships amongst team-members were vital for
85 team resilience which was evident across all four characteristics. Additionally, they found
86 that learning and team resilience are intertwined, specifically, the teams gained collective
87 confidence and subsequent learning through experiences of success while also learning from
88 their experiences of adversity by accumulating past challenges and creating the belief that
89 they can overcome future setbacks (Morgan, Fletcher & Sarkar, 2013).

90 Following this study Morgan et al. (2015) analysed the autobiographies of eight members
91 of the 2003 England rugby union World Cup winning team. The objective of this study was
92 to explore the psychological processes of team resilience in elite sport to aid in developing an
93 understanding of how resilient teams function. Their findings demonstrated that the resilience
94 process was integral for the achievement of success and excellence at an elite sporting level.

95 Specifically, the findings revealed five main psychosocial processes underpinning team
96 resilience: transformational leadership, shared team leadership, team learning, social identity,
97 and positive emotions. Additionally, in agreement with Fletcher & Sarkar (2012), the
98 findings of the study revealed that team resilience was illuminated through a progressive
99 narrative form as team members were found to evaluate stressors positively, focussing on
100 moving forwards as a team despite setbacks (Morgan, Fletcher & Sarkar, 2014).

101 This work has enabled researchers to come closer to an understanding of the
102 psychological attributes, behaviours and social support networks which are necessary for
103 athletes to acquire the greatest sporting success (Greenglass & Fikesnbaum, 2009; Lelorain,
104 Tessier, Florin & Bonnaud-Antignac, 2012). Indeed, in their development of mental-
105 fortitude training, Fletcher & Sarkar (2016) have identified the three main aspects of
106 resilience for sustained success, specifically: personal qualities, facilitative environments, and
107 a challenge mind-set. Research into this field is of importance for informing sporting
108 professionals involved with the cultivation of resilience in elite athletes.

109 While there is an emerging body of resilience research within sport, little research has
110 specifically focused on one of the most stressful components of competitive sport identified
111 by elite athletes; that being the build up to competition. Studies have tended to focus on the
112 negative appraisals and emotions experienced by athletes (Neil, Hanton, Mellalieu &
113 Fletcher, 2011) and how challenging such appraisals can be an important resilience-related
114 mechanism for athletes (Fletcher & Sarkar, 2012). The current study sought to build upon
115 existing work, through exploring the personal meanings and experiences of resilience
116 amongst elite athletes in the build up to international competitions. As outlined above, the
117 build up to important competitions is a time in which athletes are likely to experience a
118 variety of stressors and adversities. Thus, it is believed that gaining an understanding of

119 athletes' experiences at this time will add to pre-existing knowledge of resilience in elite
120 sport.

121 In elite sport, the specific attributes needed to be successful vary depending on the sport
122 in question. The study focusses on elite badminton players as, to date, little resilience
123 research has been conducted with such athletes. It was also a sporting population that the lead
124 researchers had access to through sporting connections in the elite, competitive circuit.
125 Badminton is a highly explosive and skills based sport and it is said to be the world's fastest
126 racket sport (Gowitzke & Waddell, 1979). In order to be successful at an elite level, the
127 player must possess superior technical skills, game tactics, fitness and psychological
128 preparation (Omosegaard & Tindholt, 1996; Ooi et al., 2009). It is a technical, multi-
129 directional sport which involves fast paced decision making and creative play (Seth, 2016).
130 Thus, at an elite level, badminton requires a dynamic set of athletic skills with combined
131 elements of both power and endurance (Hughes, 1995). Thus, elite sporting performance, as
132 required in competitive badminton, provides a good illustration of resilience at work
133 (Frydenberg, 2017).

134 The current study sought to contextualise and interpret the personal meanings and
135 understandings of resilience in the build up to competition, amongst elite, professional
136 badminton athletes. The study aimed to explore how elite athletes' understand resilience
137 according to their experiences of preparing for competitions; as well as factors which may
138 have hindered such resilience.

139 **Method**

140 **Participants**

141 The participants were six elite full time badminton players who were all working and
142 competing at the National Badminton Centre in the UK at the time of the study.

143

144 **Procedures**

145 The athletes were recruited on a voluntary basis by the researcher through a key
146 contact who played badminton at an international level. The Performance Director of
147 Badminton UK gave permission for the research to take place and provided professional
148 badminton players with information about the study with the lead researcher's contact details
149 should they wish to take part. Participants were then provided with the opportunity to ask the
150 lead researcher any further questions about the study and what their involvement would be,
151 before agreeing to take part. Ethical approval was granted from The University of Glasgow
152 School of Education prior to conducting the research and informed consent was gained from
153 participants.

154 Six participants were chosen as this is the suggested number for a study using IPA
155 (Smith, Flowers & Larkin, 2009). Purposive sampling, a technique widely used in qualitative
156 research (Patton, 2002), was adopted to recruit a small and situated sample. This involved
157 identifying and selecting individuals with experience of competitive badminton at an elite
158 level, that were also available and willing to discuss their experiences. This approach also
159 allowed for individual participant's data to be attended to ideographically before a
160 comparative analysis of participant material was performed. Keeping the sample size small
161 and situated is a strategy that retains an idiographic emphasis whilst embedding any
162 emerging patterns in the data within a social and historical context (Snelgrove, Edwards &
163 Lioffi, 2013).

164 Purposeful sampling is a technique widely used in qualitative research for the
165 identification and selection of information-rich cases for the most effective use of limited
166 resources (Patton, 2002). This involves identifying and selecting individuals or groups of
167 individuals that are especially knowledgeable about or experienced with a phenomenon of
168 interest (Cresswell & Plano Clark, 2011). In addition to knowledge and experience, Bernard
169 (2002) and Spradley (1979) note the importance of availability and willingness to participate,
170 and the ability to communicate experiences and opinions in an articulate, expressive, and
171 reflective manner. In contrast, probabilistic or random sampling is used to ensure the
172 generalizability of findings by minimizing the potential for bias in selection and to control for
173 the potential influence of known and unknown confounders.

174 The participants were aged between 21 and 26 years of age (mean = 23.10) with four
175 male and two female participants. The athletes varied in their level of experience within the
176 sport, ranging from four to eight years of professional experience (mean = 5.50 years). All
177 participants were within the top 100 in world rankings. The participants were not recruited
178 due to their success at an international level. The researcher wanted to gain the perspective of
179 elite athletes over a range of abilities and stages in their professional badminton careers.

180 **Data Collection**

181 The data was collected through individual, semi-structured interviews with each
182 participant. With the participants' consent, each interview was recorded using a digital audio
183 recorder. A notebook was also used for keeping reflective field-notes. The interviews were
184 organised around the athletes' training schedules and took place at the National Badminton
185 Centre. As with the majority of qualitative research, interviewing is well suited method for
186 IPA studies, given that it inherently involves the co-production of knowledge and experience
187 by the two (or more) individuals who are involved in the conversation (Smith & Sparkes,

188 2016). Given that the participants were experiential experts with respect to the topic of
189 investigation, the researcher sought to enable the participants to evoke and bring to life their
190 own lived experiences and understandings of resilience in competitive badminton.

191 The lead researcher's positionality was that of an 'outsider' of the sport (Elias &
192 Scotson, 1994); it was important for the researcher to be open and receptive to novel and/or
193 unexpected topics or issues introduced by the participants (Fontana & Frey, 2000). The lead
194 researcher was unaware of the specific etiquette, norms and values held by the athletes within
195 their sporting context and therefore sought to learn and reflect on such processes and how this
196 impacted on her interpretation of the data.

197 During the interviews, participants were asked questions to about their
198 conceptualisations of resilience and their experiences of stress in the build-up to international
199 competitions. The questions were developed from a review of previous qualitative studies
200 exploring resiliency in sport literature (Fletcher & Sarkar, 2012; Galli & Vealey, 2008;
201 Morgan, Fletcher & Sarkar, 2013, 2015). For example: What does resilience mean to you (in
202 the build up to an international competition)?; What causes you stress when preparing for an
203 international competition?; How does the build-up to an important competition alter your
204 training schedule?; Which people in your life do you rely on in times of stress?; Are there any
205 other factors you think are important in fostering resilience? The length of the interviews
206 ranged from 23 to 33 minutes with a mean of 29 and a standard deviation of 3.69. The
207 interviews were principally led by the participants, as the richness and depth of the results
208 relied on the participants' open and authentic dialogues in expressing their unique
209 understandings, feelings and experiences of the sport. After the interviews were held, the data
210 was transcribed in full verbatim.

211 **IPA and Philosophical Underpinning**

212 An IPA approach was used to analyse the data (Smith, 1996; Smith, 2011). The
213 benefit of using IPA within this research was the potential to uncover novel aspects of
214 meaning and experience which were particular to this population. The aim of IPA is to
215 generate an in-depth interpretation of how individuals understand their world through the
216 unique meanings that particular experiences, events and states hold for them. The theoretical
217 underpinnings of IPA are rooted within phenomenology, hermeneutics and ideography.

218 The phenomenological approach is predominantly concerned with lived experience; it
219 states that each individual's world is wholly unique from another, as they experience their
220 world in a specific way and provide unique meanings and relations to each phenomenon they
221 encounter (Joseph, 2014). For this reason, phenomenology asserts that an individual's world
222 can never be fully understood by another. Keeping this in mind, IPA endeavours to gain the
223 best possible understanding of the participants' worlds through their descriptions of certain
224 features of their lived experiences (Smith, 2011).

225 The researcher has an active role in the analysis of the data through a process of
226 engagement and interpretation as their own world of individual conceptions complicate the
227 work while also making it possible (Smith, 2004). The researcher's personal concepts are
228 essential in order to make sense of the participant's understandings through a process of
229 interpretive activity; the researcher is engaging in a double hermeneutic in which they are
230 trying to make sense of each participant trying to make sense of their world (Smith, 2011).

231 Each of the transcripts were read and re-read by the lead researcher to ensure
232 complete familiarity with the text. The lead researcher then began an idiographic case-by-
233 case thematic analysis of each individual transcript, searching for meaning through the words
234 of each participant. Each individual transcript was read as wholly independent so that the
235 researcher was not influenced by themes which had previously emerged. Once each transcript

236 had been read individually, all the themes which had emerged were searched for patterns
237 across the cases (Smith, 2016). These themes were then ordered into clusters, while the
238 researcher continuously related back to the transcripts so that their interpretations connected
239 to what was actually said by each participant. In turn, these themes were examined critically,
240 compared with each other as well as with the lead researcher's evolving and shifting fore-
241 understandings (Smith, Flowers & Larkin, 2009). In this sense, adopting an IPA approach
242 involved a synthesis between the research participants' sense making and that of the lead
243 researcher during each stage of the analysis, providing an entire framework for conducting
244 research (Smith, 2009). All themes were cross checked by the co-researcher as a means of
245 ensuring the credibility and quality of the analysis (Patton, 1999).

246

Results

247 The participants' accounts clustered around four subordinate themes: an optimistic appraisal
248 of pressure as integral to resilience; a shift from emotion to acceptance (allowing for change
249 and recovery); striking a balance between life and sport; and a quality relationship between
250 coach and athlete facilitating optimal performance (see table 1 for a summary of the
251 subordinate and sub-themes). The subordinate themes are presented in bold and the
252 associated sub-themes are presented in bold with italic. Pseudonyms have been used to
253 maintain the confidentiality of the participants and quotes from the transcripts are presented
254 to evidence the emergent themes.

255 **An Optimistic Appraisal of Pressure as Integral to Resilience**

256 The idea that one must be optimistic in order to be resilient and compete well during
257 high-pressured badminton competitions resonated throughout all of the participants'
258 accounts. Emphasis was placed on the mental component of preparing for competitions, as
259 James commented "It's all mental for me". In particular, being in the "right frame of mind"

260 (Mark), both before and during a badminton match, was seen as crucial. Having the required
261 focus, concentration, motivation and determination were seen as essential in maintaining an
262 optimistic frame of mind in order to perform optimally in competitions. Emma described the
263 importance of maintaining this optimal state of mind on the build up to competition in order
264 for her to have an unshakeable confidence in her ability to achieve her full potential during
265 badminton competitions:

266 I think my motto is always kind of like, ‘don’t leave any stone unturned’, so if
267 that last rep in the gym that you don’t feel like doing, do it, because in the long
268 run (pause) otherwise it may make you doubt yourself (Emma).

269 This was followed by committed action towards a training schedule that would optimise
270 competitive performance. Her interesting use of the idiom “don’t leave any stone unturned”
271 as her core motto acted as a vow to herself to do everything within her power to be the best
272 she could possibly be without the exception of even missing one last repetition in the gym. It
273 seemed Emma’s resilience stemmed from a constant drive towards putting all her focus,
274 energy and ambition into her training; creating a sense that she could perform to her full
275 potential.

276 *Pressure (Internal & External) and Drive to Perform and Achieve*

277 The feeling of a constant pressure to perform and achieve was reiterated across all the
278 participants’ accounts with mixed appraisals of the effects this had on their mental state
279 during the build up to competitions. This pressure emanated from both internal and external
280 factors and affected each athlete differently. The personal pressure and drive to perform
281 optimally in competition was experienced by all the participants. Mark appraised the internal
282 pressure he experienced before a competition as a positive factor that contributed towards his
283 own sense of resilience:

284 Obviously you are going to get a bit tense [before an important match], but I
285 actually look forward to those tight moments, because I think that is when I'm at
286 my best, because I'm the most concentrated. Because I hate losing so I just go into
287 every match, it doesn't really matter what it is, I always want to win.

288 Mark described how he thrived off the stress and pressure associated with performing
289 in competitions. It seemed to be his competitiveness and drive to win which allowed him to
290 foster the resilience he needed to react positively during the stress of competing at a high
291 standard.

292 In contrast, Theo explained how his sense of resilience was hindered on the build up to
293 competitions as a consequence of the perceived expectations of others and concern with
294 being negatively judged:

295 It can be quite tough. Like being able to kind of bring your optimum level when
296 you've got someone kind of coming at you, wanting to beat you that much, and
297 for you it feels like, well if I win I'm expected to win, but if I lose then
298 everyone's going to kind of judge you for it. So it's a kind of lose, lose situation.

299 Theo's concern with being beaten by opponents and experiencing negative
300 appraisals from others were viewed as having a detrimental impact on mental state.
301 Similarly, Jenna's experience of how her own high expectations of beating an opponent
302 at the European Championships played a part in her and her doubles partner's
303 subsequent loss:

304 There's pressure when you know that medal is within grasp (pause). We had the
305 first round but we ended up losing and they were nowhere near as good. There's
306 just that pressure because we knew we were capable and had the training to get

307 the medal. That put too much pressure on us and then we went on court and we
308 were quite tense and tactically not very good.

309 Jenna's vivid description of how "that medal [was] within grasp" encapsulated her
310 appraisal of the medal as metaphorically close enough to experience, as if she could have
311 imagined the feeling of winning it. Here, the pressure of Jenna's internal expectations,
312 stemming from her confidence in both her own abilities, her partner's abilities and the quality
313 of their training, were considered to have hindered her performance. In order to feel a sense
314 of resilience and play optimally, Jenna sought to find the balance between healthy levels of
315 pressure encouraging motivation and negative levels causing a decrement in performance in
316 the build up to competitions.

317 **Shift from Negative Emotions to Acceptance (Allowing for Change and Recovery)**

318 All the participants repeatedly described how they evaluated stressful situations and
319 circumstances in the build up to competitions with initial feelings of negative emotions;
320 especially that of frustration, anger and fear. The circumstances they frequently appraised as
321 stressful included attaining injuries and the experience of losing in badminton competitions.
322 Participants often used combative language associated with a "battle" (Ross) to describe
323 being on court during competitions. Ross explained how he considered his opponents to be a
324 major cause of stress:

325 I think the main thing for me would definitely be the opponent getting inside your head
326 rather than focussing on what you need to do.

327 This strong visual metaphor highlighted the distraction he experienced from the
328 presence of his opponents at a crucial time when he needed to remain focussed in order to
329 perform optimally. He explained how this dynamic often had an influence over his emotions:

330 For me sometimes I get a bit too, like into it and I get a bit angry. If I'm into the
331 game and I think I can win sort of thing and then something doesn't go my way I
332 can sort of kick off a little bit and get in like a battle with my opponents.

333 Ross's anger caused him to enter into a "mental battle" with his opponents which
334 negatively impacted on his performance, hindering his resilience and causing him to lose
335 focus. Ross explained that this was "not the best way to deal with it"; he sought to build his
336 future resilience by coping with the stress he experienced on court instead of reacting with
337 unhelpful emotions. If Ross has the previous knowledge that he can cope effectively with the
338 potential stressors of a match, he will be able to foster the resilience necessary to withstand
339 the pressures of these stressors in future competitions. Similarly, Mark recognised the need to
340 develop resilience for dealing with set-backs in competitions:

341 You can keep down the same path forever, making the same mistakes over and over,
342 or you can change and make yourself better.

343 All of the participants had encountered injuries during their sporting careers. Injuries
344 were appraised as extremely stressful and recognised as a time in which high levels of
345 resilience were needed in order to get through the recovery period and continue playing; as
346 Jenna explained:

347 All I'm doing is rehab. I can't actually play properly, but then things like resilience
348 kicks in and that makes you want to overcome it and get back on court.

349 The constant "ups and downs" (Theo) of being injured and not knowing the full
350 timescale of recovery was appraised by all the participants as a difficult aspect of being an
351 athlete, as captured by Jenna's account:

352 I think it's hard for everyone because you think you're back and fit and I'm on
353 court again and then all of a sudden it starts again and it's like pretty upsetting
354 and you're a bit like frustrated and angry to start with and I think, then you kind
355 of just have to knuckle down and try and beat it again and again.

356 When Jenna's injury persisted she described an initial response of intense negative
357 emotions, moving to an acceptance of the injury. Removing oneself from the initial feelings
358 of intense, negative emotions and reaching a sense of acceptance seemed to be an important
359 factor in aiding the athletes to build the resilience needed in order to overcome injuries,
360 continue with their training and begin competing again.

361 *Loss and Defeat as Opportunities for Learning*

362 Both fear of losing and the experience of defeat at badminton competitions were
363 expressed as being significant stressors by participants. Whilst such stressors were initially
364 experienced as frustrating, they were also appraised as opportunities for learning, as Jenna
365 capsulated:

366 Everyone has those tournaments where you don't play your best, but it's not
367 letting that affect you when you play the next one or the one after that. Rather
368 than (pause) hopefully that's one out of the way now [laughter] and I played
369 really good all summer! And we've got some big ones coming up [European
370 Championships], so I'm kind of just taking that approach and learning from it, I
371 can't change it now, so you have just got to look forward.

372 Jenna was able to accept her past defeats with a comforting generalisation that
373 losing is something every player must experience. It seemed that her resilience after a
374 difficult defeat was aided by this acceptance which allowed her to look optimistically

375 towards the future with the recognition that the past cannot be changed. An emphasis
376 was placed on “learning, learning from every tournament” (James) by the participants.
377 James described how his initial disappointment following a defeat turned to acceptance
378 after losing at a competition:

379 The disappointment was an initial feeling, so I just use it as a building block for
380 years down the line em, so we have to take it with a pinch of salt really, and so
381 we always have more in the future to build up to.

382 The focus on learning allowed James to accept loss as a necessary “building block”
383 (James) in order for him to improve as a professional badminton player. It seemed that this
384 acceptance enabled him to foster resilience with a look to his future improvements and
385 potential achievements. Indeed, acceptance, learning from defeats and improvement as a
386 constant and integral factor of continued success was central to all the participants’
387 experiences, as captured by Mark:

388 Actually accepting that you can improve something is where you can become
389 better. If you look at someone who maybe would say that they’re not resilient or
390 they’re not very good at dealing with something bad, that is where they stay at the
391 same level, because they can’t accept that something is wrong. You have to be
392 able to say like I’m not good at, you know, a back hand shot, I need to work on
393 that, but until you can admit to yourself that something is affecting you then
394 nothing is going to change.

395 In this sense, resilience may be fostered through an acceptance that both loss and
396 defeat are inevitable conditions within competitive sports, yet can be intrinsically
397 linked to learning opportunities, continued improvement and personal growth as a
398 player.

399 Striking a Balance in the Life of Sport

400 Participants expressed the importance of striking a balance within their sporting
401 careers; both in terms of their support networks and in their training regimes. They
402 emphasised the huge commitment being a professional badminton player involved in
403 terms of their time and commitment yet also placed importance on “having a life
404 outside the sport” (Ross). This was captured in Mark’s account after struggling with a
405 significant break-up of a relationship whereby he described:

406 I realised how important, not just badminton is, but life is as well because you
407 take for granted how happy you are or what you are doing out of court sometimes,
408 because it’s not the priority, because you are just concentrating on badminton. But
409 if you don’t do both, then I don’t think you can be successful at badminton.

410 Long hours of training, limited flexibility in training schedules, and extensive travel for
411 competitions were just some of the lifestyle factors of being a professional badminton athlete
412 that impacted on their abilities to maintain a work-life balance. At the same time, they
413 recognised the need for peer support, personal networks and time away from the sport as
414 positively influencing their personal resilience in coping with the demands of being a
415 competitive player.

416 In order to achieve higher levels of resilience and play optimally, the athletes sought to
417 find the balance between healthy levels of pressure encouraging motivation and negative
418 levels causing a decrement in performance in the build up to competitions. Mark described
419 how his aspirations for success and his drive to achieve were mirrored by his peers:

420 I’ve always wanted to achieve. I mean I came from a group of people who, well
421 there is still a few of us here, where we all trained together and we were like eight,

422 nine, ten years old and we always had a dream that we would be here, you know,
423 competing for Olympic medals, that kind of thing so I wasn't gonna let an injury
424 get in the way of that. So I mean, I knew that if I did everything right that I would
425 be able to play again. I think the thought of stopping playing never occurred to
426 me. So I just knew that was my only option at the time, to make myself better
427 really (Mark).

428 Mark appraised the injury as a barrier which had the potential to destroy his lifelong
429 dream of competing for Olympic medals. The resilience Mark needed to break down this
430 perceived barrier and return to sport stemmed from an innate drive and pressure to achieve as
431 well as a recognition of the importance of the support he received from his peers.

432 ***Finding the 'Fine Line' Between Peaking and Over Training***

433 All the participants believed they had experienced the effects of over training during their
434 sporting careers. They had struggled to find the "fine line" (Theo) between peaking and over
435 training. Rapid changes in training regimes, strenuous competition itineraries and overcoming
436 sporting injuries often led to athletes searching for ways to aggregate gains over time in terms
437 of their sporting performance. Theo evaluated the constant possibility of over training:

438 It's like the balance between, you know, you're training really hard and trying to do
439 really well but you have to not then over train otherwise that will hinder it.

440 The participants sought to find the balance between training hard and not pushing
441 themselves too far both physically and psychologically. They recognised the potential
442 personal costs of over-training in terms of increased risk of injury and the consequent mental
443 pressure and exhaustion they experienced and how this often had a detrimental impact on
444 their performance. Emma described how she found it difficult to know her own personal

445 limits when it came to training optimally and the subsequent negative emotions she
446 experienced:

447 I get a bit more frustrated now because I push myself quite a lot so I'm always on
448 that edge of like, I think everyone here is always on that edge of where you can
449 over push yourself, but I've been injured quite a lot, I like to think I know where
450 that line is, and sometimes I cross it and that's really annoying but I can't help it!

451 The difference between Emma's experiences of training optimally and over training as
452 being "always on that edge", suggests that the space between the two was extremely small.

453 The balance between training optimally and over training was not necessarily easily
454 achieved, even for athletes who had experienced both physical and psychological injuries as a
455 consequence of over training. Participants had found it difficult to stop themselves from
456 surpassing their limits; their "competitiveness and drive" (Mark) which had helped them to
457 become elite athletes could, at times, work against them resulting in over training.

458 ***Support From Those Who Understand the Life of Sport***

459 The continuing support of both friends and family was appraised by every participant as
460 extremely important in fostering a sense of personal resilience in the build up to
461 competitions. There was an interesting contrast between their perspectives of support from
462 those who "understand the life of sport" (Mark) and those who were perceived as "outsiders"
463 (James). Theo placed significance on gaining support from those with shared experiences
464 when training for an important competition:

465 If you're the only one going through it [training] then it can be quite tough to
466 relate to other people. Whereas, if you have someone who is going through that
467 sort of pain and suffering with you, then it does make it a lot easier I think.

468 It seemed that Theo built the resilience he needed to endure the “pain and suffering” of
469 training through the support of those around him who were sharing his experiences. All the
470 participants placed importance on having the support of those who had a shared
471 understanding of the lifestyle of being a competitive, professional badminton player. At
472 times, participants had found that familial and/or social support networks outside the sport of
473 badminton were less able to provide the support they needed. Jenna compared the support she
474 received from her partner who also played professional badminton to that of her parents:

475 We both kind of know what it feels like when you’re not playing well or you’re a
476 bit annoyed [partner]. I’ve got my mum and dad as well but I find myself arguing
477 with them quite often, like after I lost [European Championships] but he
478 [boyfriend] understands that you can’t play your best all the time and it’s good to
479 have that person there.

480 The contrast between the support Jenna received from her partner and that of her
481 parents was striking. Even though she understood that her parents wanted “the best for me”
482 (Jenna), without an adequate understanding of her sporting experiences they were unable to
483 offer her the support she needed. It seemed that resilience was built through the dynamic
484 support of others during times of stress, with a particular emphasis on the value of support
485 from those with shared experiences.

486 **A Quality Relationship Between Coach and Athlete Facilitating Optimal Performance**

487 Having a good quality coach-athlete relationship was foreseen as being a significant
488 factor in fostering resilience in the build up to a competition. In discussing both successes and
489 set-backs within their sporting careers, the participants made reference to this relationship, as
490 James stated “The coaches are the ones that will get you far”. The quality of this relationship
491 was considered as being instrumental in helping them to perform optimally and achieve

492 success in their sport. Trust, respect, commitment, openness, understanding and effective
493 communication were qualities that the participants' viewed as being key in developing a
494 "good solid relationship" (Theo). Theo emphasised the need for mutual reciprocity in terms
495 of such qualities in the coach-athlete relationship:

496 I've always been quite open and honest and when you get the same response from
497 your coach and they're open and honest then, you know, things are always going to
498 work out a lot better.

499 Dynamism within the coach-athlete relationship was also a quality that participants
500 valued within the coach-athlete relationship. Each of the participants needed something
501 different from their coach as each individual had different attitudes, coping strategies and
502 unique appraisals of stress in the build up to competitions. This individuality was addressed
503 by the participants themselves, as Mark explained: "You're not going to get someone that's
504 got everything, so it's just what works best for you". Theo elaborated on this point:

505 You are trying to get the best out of each other; the players trying to learn from the
506 coach and the coach is trying to find the best way to be able to coach the player.

507 For a coach to have an optimum relationship with each player they must understand
508 them individually and adapt their coaching style to suit each athlete's unique needs. Emma
509 explained how a coach who understood her could help facilitate her performance in important
510 competitions:

511 I definitely feel that if you have a coach behind your court that knows you better
512 or that you have discussed like how you are on court and they understand you, I
513 think it goes a lot easier, like the matches you feel a lot more confident. I think if
514 someone doesn't quite know you behind the court you can almost get into a battle

515 with them, when you're trying to play at the same time, so that makes it really
516 difficult to play because there is always two things going on at the same time.

517 Lack of understanding and/or dynamism between an athlete and their coach could be
518 detrimental to achieving optimum performance, as Emma described how it caused a
519 distracting "battle" between herself and her coach, creating a situation in which she was
520 playing against her coach as well as her opponent. Having a dynamic relationship with their
521 coaches was viewed by the participants as a means of fostering the resilience they needed to
522 play optimally in competitions.

523 **Discussion**

524 In exploring elite athletes' personal meanings and experiences of resilience in the
525 build up to competition in the sport of badminton, the current study found that the athlete's
526 often equated their own sense of resilience with that of achieving optimal performance in
527 their sport. In drawing upon both internal and external processes that contributed towards
528 their sense of resilience, the athletes' explanations support the conceptualisation of resilience
529 as a dynamic process of interactions between the person and their environment (Egeland,
530 Carlson & Sroufe, 1993; Fletcher & Sarkar, 2012; Fletcher & Sarkar, 2013; Galli & Vealey,
531 2008; Luthar, Cicchetti, & Becker, 2000; Sarkar, 2017). As found in previous research (Galli
532 & Gonzalez, 2015; Galli & Vealey, 2008), having a personality characteristic of positivity
533 and optimism was viewed as essential in building resilience in sport.

534 The athletes within this study experienced a continual feeling of pressure to perform
535 at a high standard which impacted on their mental state. This pressure was appraised both
536 positively and negatively by the athletes, influencing them from both internal and external
537 sources. While for some of the athletes, this pressure was appraised negatively, causing their
538 performance to be hindered in the build up to competitions, for others it served as a means of

539 positive challenge creating a heightened confidence and the potential for an improved
540 performance.

541 This finding adds to a multitude of extant research indicating that athletes with high
542 levels of resilience are able to transform the negative feelings of stress associated with
543 competing into positive expectations of performance (Fletcher & Sarkar, 2012; Hanton &
544 Jones, 1999; Jones, Swain & Hardy, 1993; Kaiseler, Polman & Nicholls, 2009). Given that
545 learning to manage feelings of stress and anxiety associated with competitive sport are skills
546 that can be taught (Hanton & Jones, 1999; Krane & Williams, 2006), coaches and sport
547 psychologists working closely with athletes may be best placed to identify and work with
548 athletes that are struggling in coping with such pressures (Abedalhafiz, Altahayneh & Al-
549 Halig, 2010; Sarkar & Fletcher, 2014).

550 Similar to earlier work (Galli & Vealey, 2008; Gould, Dieffenbach & Moffett, 2002;
551 Richardson, 2002), the athletes described how having the opportunity to adapt to set-backs
552 allowed for an increase in their resilience once the adversity had been successfully overcome.
553 With this research in mind, it can be postulated that elite athletes aiming towards the highest
554 of success should be encouraged to seek out and welcome challenging situations, coupled
555 with the skills to manage the associated stress and pressures. This may allow for successive
556 adversities and set-backs to appear more tolerable (Sarkar & Fletcher, 2014) and encourage
557 improvements in future performance (Arnetz, Nevedal, Lumley, Backman & Lublin, 2009;
558 Cronin & Allen, 2015; Danish, Petipas & Hale, 1993; Hobfoll, 2010). The appraisal of
559 adversity as a learning experience is an extremely important element in the fostering of
560 resilience in elite athletes, enabling an acceptance of stressors such as loss, defeat and injury
561 (Galli & Vealey, 2008).

562 The athletes recognised the fine line between training optimally and over training.
563 Over training was a constant possibility during the athletes' sporting careers as they
564 explained that it was extremely difficult to know their own personal limits. This finding
565 suggests that it is important for athletes and their coaches to develop an in-depth
566 understanding of periodization allowing for optimal recovery plans (Gould & Maynard, 2009;
567 Schwenk, 2000). In agreement with much past research (Abedalhafiz, Altahayneh, & Al-
568 Haliq, 2010; Evans, Wadey, Hanton, & Mitchell, 2011), injury was appraised as a significant
569 stressor by the athletes. Recent systematic reviews looking at the psychology of sport injuries
570 propose that injury is frequently associated with negative emotions such as grief, loss,
571 frustration, anxiety, anger and depression (Brewerm, 2007; Certel, Bahadir & Karabulut,
572 2013; Colbert, Scott, Dale & Brennan, 2012; Evans, Mitchell & Jones, 2006; Fletcher &
573 Sarkar, 2016; Kirker, Tenenbaum & Mattson, 2000; Sheldon & Aimar, 2001). Indeed, the
574 athletes in the current study described a shift from a negative emotional state to that of
575 acceptance as a means to aid their recovery and adapt accordingly.

576 In accordance with the findings of Fletcher & Sarkar (2012) the athletes in the study
577 evaluated balancing sport and life as a welcomed necessity in order for them to build
578 resilience and gain a more positive perspective on their sporting careers. The role of social
579 support was paramount in the fostering of resilience during the build up to and during
580 competition. As reported in earlier work (Fletcher & Sarkar, 2012; Freeman & Rees, 2009,
581 2010; Greenglass & Fikesnbaum, 2009) support from those who understand the life of sport,
582 most notably fellow athletes and badminton coaches, was greatly valued by the athletes.

583 In agreement with a multitude of previous research, the coach-athlete relationship was
584 perceived by the athletes as being one of the most significant factors contributing to optimal
585 sporting performance and success at an international level (Durand-Bush & Salmela, 2002;

586 Gould, Jackson & Finch, 1993; Gould & Maynard, 2009; Greenleaf, Gould & Dieffenbach,
587 2001; Pensgaard & Roberts, 2000; Poczwardowski, Diehi, O'Neil, Cote & Haberl, 2014).
588 Athletes require a dynamic support system from their coaches, with each individual athlete
589 relying on different forms of support (Gould, Dieffenbach & Moffett, 2002). The ability of a
590 coach to understand an athlete provides the athlete with a level of trust and self-confidence
591 that has the potential to guide them towards excellence in their sport. In support of previous
592 research (Gould & Maynard, 2009), the most important factors to constitute a strong
593 relationship was open and honest communication allowing for a relationship of mutual
594 understanding and reciprocal trust between the coach and the athlete.

595 As outlined above, this study supports the findings of multiple other studies on
596 resilience in sport. It originally contributes to the literature by specifically focussing on
597 athletes' experiences of resilience in the build-up to important competitions and opens-up
598 avenues for future research into this area.

599 **Limitations and Future Directions**

600 A major limitation of the study was the use of single interviews instead of holding
601 multiple interviews over a period of time. With the increase in the use of qualitative research
602 methods in sport psychology within the last two decades, researchers have addressed the need
603 for more rigorous research designs which incorporate many exchanges with participants
604 using multiple forms of data collection (Culver, Gilbert & Trudel, 2003). Meeting the
605 participants only once limits the amount of depth and comprehensiveness necessary in order
606 to draw conclusions from the data.

607 Future studies may benefit from utilising a longitudinal interview process which
608 would allow for a thorough investigation of the dynamic nature of athletes' appraisals of
609 resilience during the process of coping with stress and adversity (Galli & Vealey, 2008).

610 There is a need for future longitudinal research to examine whether athletes do in fact achieve
611 psychological growth through their dealings with adversity, and the extent to which this
612 development transfers to different types of sport adversity.

613 From the findings of the current research, it is clear that the build up to an important
614 competition is a time at which elite athletes may experience a huge number of stressors
615 (Gould & Maynard, 2009). This study was limited by only including athletes from one sport
616 and being retrospective in nature. Interviewing athletes from only one sport may reduce the
617 generalizability beyond badminton and asking participants about their past experiences of
618 stress in the build-up to an international competition may have compromised the accuracy of
619 the data through ‘faded’ perceptions of past experiences (Fletcher & Sarkar, 2012). Future
620 research could alleviate these limitations by gaining access to a sample of athletes from a
621 multitude of sports who are training in the build-up to a major sporting event at the time of
622 the study. This will allow for a fuller account of how elite athletes cope with stress in the
623 build-up to an international competition.

624 It is important to note that all the athletes within the present study described
625 successfully overcoming adversity allowing for resilient reintegration. In order to gain a
626 fuller understanding of resilience in elite sport, future research may benefit from focusing on
627 elite athletes who have struggled to adapt following set-backs in their sporting careers (Galli
628 & Vealey, 2008); for example, those who quit sport after a significant competitive loss and/or
629 injury. This may help shed light on the specific psychological resources which may influence
630 resilience capacities in dealing with stress in sport (Bryan, O’Shea & MacIntyre, 2017).

631 **Implications of Study**

632 The results of this study have implications for sport professionals who work closely
633 with elite athletes and wish to build their resilience and improve both their sporting

634 performance and well-being. Sports psychologists working with athletes who are
635 experiencing significant stressors should aim to facilitate positive growth as well as recovery,
636 through appraising set-backs, injuries and loss experiences as opportunities for learning (Galli
637 & Vealey, 2008; Morgan, Fletcher & Sarkar, 2015). This may be particularly pertinent for
638 athletes that have yet to reach the pinnacle of their sport, in order to optimise their
639 opportunities to perform at the highest level in their sporting careers. Additionally, coach
640 education programmes may benefit from accentuating the importance of building strong
641 support networks amongst athletes, developing coping skills training programmes to enhance
642 resilience in sport (Secades et al., 2016) and monitoring athletes' training loads to help reduce
643 risk of injuries (Gabbett, 2016). Further research incorporating the views of athletes' across a
644 range of sporting contexts may help further enhance understandings of how best to both
645 conceptualise and measure this concept as it is applied in sport.

646 **Conclusions**

647 Within this study a variety of situations were appraised by the participants as stressful
648 in the build up to competitions, including internal and external pressures to perform at a high
649 standard, the coach-athlete relationship, injury, training, and loss. A multitude of factors
650 impacted on the athletes' reactions to the adversity caused by these stressors. This research
651 supports the conceptualisation of resilience as a continually evolving process of interactions
652 between the person and their environment. As the current study demonstrates, the concept of
653 resilience is of importance in sport psychology research as elite athletes must continually
654 endure a variety of internal and external stressors in order to reach and maintain the level of
655 performance necessary to compete professionally.

656 Further theoretically derived qualitative research, exploring athletes' unique personal
657 meanings and experiences of resilience across a wide range of sporting contexts will further

658 enhance understandings of this construct. This may also help uncover the dynamic and
659 transient nature of resilience throughout an athlete's sporting career and provide a
660 developmental understanding of the processes involved in fostering resilience across the
661 sporting career trajectory.

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Table 1: Subordinate Themes and Sub-Themes

Table 1
Major Themes and Subordinate Themes

Master Themes	Subordinate Themes
<p>An Optimistic Appraisal of Pressure as Integral to Resilience:</p> <p>“It’s all mental for me.”</p>	<p>Pressure (Internal & External) and Drive to Perform and Achieve</p>
<p>Shift from negative Emotions to Acceptance (Allowing for Change and Recovery):</p> <p>“You can keep down the same path forever, making the same mistakes over and over, or you can change and make yourself better.”</p>	<p>Loss and Defeat as Opportunities for Learning</p>
<p>Striking a Balance Between Life and Sport:</p> <p>“I don’t think you can be successful at badminton if your life isn’t important as well”</p>	<p>Finding the ‘Fine Line’ Between Peaking and Over Training</p>
	<p>Support From Those Who Understand the Life of Sport</p>
<p>A Quality Relationship Between Coach and Athlete Facilitating Optimal Performance</p> <p>“If I could pin point the best times in my career so far it has always been when I’m close to a coach or I’ve understood the coach.”</p>	

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