

Stress-Related Growth in Elite Sport Performers:
Qualitative Differentiators in Psychosocial Mechanisms

Fionnuala B. Barnes and David Fletcher
Loughborough University

Kacey C. Neely
University of Stirling

Accepted author manuscript version reprinted, by permission, from *The Sport Psychologist*, 2021
35 (4), pp. 293-304. <https://doi.org/10.1123/tsp.2020-0015>. © Human Kinetics, Inc.

Declarations of interest: none.

Abstract

The purpose of this study was to explore growth following the experience of stressors and compare the experiences of elite athletes who exhibit higher and lower levels of growth. Six elite athletes (5 females, 1 male) participated in a semi-structured interview. Three athletes reported experiencing higher levels and three athletes reported experiencing lower levels of growth. Interpretative phenomenological analysis revealed understanding of self, development in athletic identity, and social support are key psychological mechanisms which differentiate elite athletes who reported experiencing higher and lower levels of growth. Athletes higher in reported growth showed greater association with meaningful behavioural actions, ultimately reflecting the modification of previously held beliefs into a new worldview. Athletes lower in reported growth reflected an attempt to maintain beliefs into an already existing worldview, thus hindering growth. The findings show psychological mechanisms that accumulatively promote growth and provide a foundation for subsequent intervention studies.

Keywords: athlete, development, growth, interpretative, performance, well-being

1 **Stress-Related Growth in Elite Sport Performers:**
2 **Qualitative Differentiators in Psychosocial Mechanisms**

3 In search for a balanced and complete view of athlete experiences, research into
4 growth following stressful life experiences within sport and exercise psychology has gained
5 increasing attention (Fletcher, 2019; Howells et al., 2017). In this instance, growth is defined
6 as “positive changes in cognitive and emotional life that are likely to have behavioural
7 implications; the changes can be profound and may be truly transformative” (Tedeschi et al.,
8 2018, p.5). While considerable research demonstrates the damaging consequences of stressful
9 events on well-being and performance for athletes (e.g., Brewer, 2007), a growing body of
10 research elucidates the possibility of growth. This is particularly important given the array of
11 negative experiences elite athletes often need to confront to succeed at high levels of
12 competition (Sarkar & Fletcher, 2014). These negative life experiences have been labelled
13 various terms, including stressors, adversities, and traumas (e.g., Arnold & Fletcher, 2021;
14 Fletcher, 2019; Howells et al., 2017). In recognition of the recommendations for the use of
15 terminology in the sport related growth literature (e.g., Brown et al., 2020), for the purpose of
16 this research we have employed the term stressor to be defined as “the environmental
17 demands (i.e., stimuli) encountered by an individual” (Fletcher et al., 2006, p. 359). These
18 stressors can be experienced across the lifespan, ranging from nonsporting life events, to
19 events relating to the competitive performance of the individual, and can encompass various
20 events, situations, and circumstances (Fletcher, 2019). Studies have reported growth
21 following a range of stressful events across a variety of contexts (viz., Linley & Joseph,
22 2004). A substantial body of literature supports Tedeschi and Calhoun’s (2004) identification
23 of positive psychological benefits following an adverse event with further theory and
24 research collectively suggesting growth resides across a range of domains and entails more
25 meaningful relationships, an increased appreciation for life, a change in priorities, an

26 increased sense of personal strength, and a richer spiritual awareness (viz., Joseph et al.,
27 2012).

28 Most recently, Howells and colleagues (2020) have highlighted the timely nature of
29 research into the “genuine unknowns” (p. 2) of growth in sport and exercise psychology,
30 specifically relating to the need for intervention studies to understand how best to facilitate
31 growth among athletes. Nonetheless, the variety in terminology to conceptualise growth and
32 models to explain the phenomenon have perpetuated conceptual ambiguity (Howells et al.,
33 2017). The range of theoretical explanations provide complementary explanations of the
34 phenomenon, reviewed thoroughly by Howells et al. (2017). The models include Tedeschi
35 and Calhoun’s (1995) functional-descriptive model of posttraumatic growth, Joseph and
36 Linley’s (2005) organismic valuing theory of growth through adversity, Joseph and
37 colleagues’ (2012) affective-cognitive processing model, and Maercker and Zoellner’s (2004)
38 Janus-faced model of self-perceived post-traumatic growth. Despite theoretical variety,
39 Joseph and Linley (2006) commented that throughout the various theoretical explanations,
40 there is a consistent focus upon the notion of growth related to an individual working through
41 their experience to develop a new structure congruent between their self and their experience,
42 allowing them to go beyond their previous levels of functioning. This recognises Janoff-
43 Bulman’s (1989) concept of the role of appraisal processes in an individual’s ability to cope
44 with a stressful event as they struggle to deal with the occurrence of a traumatic event,
45 causing them to question their pre-event beliefs and assumptions. In this way, growth is
46 described as the development, in the aforementioned psychosocial domains, leading to the
47 creation of a new self-structure congruent with the individual’s experience.

48 Linley and Joseph’s (2004) review on positive change following adversity
49 demonstrates the support for growth across psychology, identifying positive changes and
50 associated variables influencing growth. Specifically in the sport domain, growth-related

51 research has encompassed growth among recreational and, or competitive sport performers
52 (viz., Galli & Reel, 2012b; 2012b; Neely et al., 2018), context specific sport injury related
53 growth (SIRG; viz., Roy-Davis et al., 2017; Salim et al., 2016), sport as a vehicle for growth
54 (viz., Crawford et al., 2015; Hammer et al., 2017), and growth among elite performers (viz.,
55 Howells & Fletcher, 2015; 2016; Sarkar et al., 2015; Tamminen et al., 2013). Aligned with
56 the purpose of this study, focus was placed exploring growth among elite sport performers, to
57 offer a deeper understanding of the notion of growth identified by Maercker and Zoellner
58 (2004) and Howells and Fletcher (2016).

59 Commonly, researchers in elite sport have used qualitative methods to explore how
60 individuals understand growth and or the experience of stressors. Through interpretative
61 phenomenological analysis (IPA) with elite female athletes, Tamminen et al. (2013) found
62 the experience of adversity led athletes to question their identity, while also resulting in the
63 identification of opportunities, finding meaning in their experience, and realising the role of
64 sport in their life. Interestingly, the passage of time was identified as significant in facilitating
65 the finding of meaning and identification of growth. Providing additional support through
66 their narrative analysis, Howells and Fletcher (2015) established growth as a transition
67 encompassing the initial adoption of maladaptive coping strategies to protect an athlete's
68 identity, followed by a shift to the use of more adaptive coping strategies such as seeking
69 support. After conducting interviews, Sarkar et al. (2015), found sport and non-sport
70 significant events acted as a catalyst for the athlete's subsequent sporting success through
71 providing increased levels of sport-based motivation and learning. Furthermore, Howells and
72 Fletcher's (2016) IPA study of elite swimmers identified differentiating reports of growth. A
73 selection of athlete reports was indicative of illusory reports of growth, characterised by self-
74 deception to convince oneself of positive outcomes and exemplified through denial,
75 unrealistic optimism, and avoidance behaviour (Maercker & Zoellner, 2004). While other

76 athlete reports of growth were more suggestive of constructive growth, with reference to
77 meaningful behavioural action. In further support of the temporal component of growth,
78 Howells and Fletcher suggested earlier phases of the growth process were more reflective of
79 illusory features of growth, while later phases became reflective of features of constructive
80 growth. Collectively, the research suggests there are psychosocial mechanisms which play a
81 role in the experience of growth among individuals. Drawing upon a range of theoretical
82 explanations, the current body of research collectively suggests elite sport performers can
83 experience growth following a variety of stressful events.

84 Despite the support for growth as a real and constructive phenomenon, the
85 veridicality of growth experiences has been questioned (e.g., Zoellner & Maercker, 2006).
86 More specifically, scholars remain unconvinced by some accounts of growth and genuine
87 beneficial change. Taylor and Armor (1996) suggest these accounts are better explained as
88 distorted perceptions of one's experiences in order to protect an individual's self-concept, to
89 which they termed these illusory reports of growth. While the existence of growth itself is not
90 doubted, discussions question whether current self-report questionnaires and individual
91 accounts of growth accurately capture growth and have further been criticised for tapping
92 into illusory growth (Boerner et al., 2020; Frazier et al., 2009). In consideration of the
93 aforementioned literature, current studies reporting on growth use earlier questionnaires as a
94 measure of growth (Galli & Reel, 2012a) or assume the occurrence of growth from an
95 individual's retrospective account (e.g., Howells & Fletcher, 2016; Tamminen et al., 2013).
96 However, in accord with Tamminen and Neely (2016), an adverse experience does not
97 automatically precipitate positive growth. This underscores the need to further develop our
98 understanding of how athletes experience growth.

99 To date, researchers in this area have typically failed to distinguish between real and
100 illusory reports of growth in elite sport performers in terms of both the questionnaires

101 employed and the interviews conducted. However, Howells and Fletcher (2016) argued that,
102 although operationally and empirically challenging, it is important to differentiate between
103 real and self-deceptive accounts of growth to more accurately study growth (see also Boals &
104 Schuler, 2018; Boerner et al., 2020). Moreover, although researchers have begun to identify
105 a wide range of mechanisms and indicators of growth in competitive sport (cf. Howells et al.,
106 2017), little is known about how elite sport performers experience growth. The purpose of
107 this study was, therefore, twofold: (1) to explore the subjective experiences of growth
108 following the experience of stressors in elite sport performers, and (2) to compare the
109 experiences of elite athletes who report higher levels of growth with those who report lower
110 levels of growth. The reason we are exploring those higher and lower in reported growth is to
111 identify salient differentiators in psychosocial mechanisms that underpin these experiences.

112 **Method**

113 **Methodology**

114 This research was underpinned by ontological relativism (i.e., reality is multiple) and
115 epistemological interpretivism (i.e., knowledge is developed through the process of
116 interpretation). Driven by this theoretical perspective, interpretative phenomenological
117 analysis (IPA) was used to explore and interpret how elite athletes make sense of their
118 growth-related experiences following on from the experience of a stressful stimuli (Larkin,
119 Watts, & Clifton, 2006). In using IPA as a “whole way of thinking” (Allen-Collinson, 2016,
120 p. 15), it allowed for the researcher to critically reflect upon the phenomenon, moving beyond
121 descriptions of individual’s experiences of growth. Through adopting a phenomenological
122 attitude, the researcher is therefore able to provide writing which is hermeneutic in nature and
123 can thus better identify the structures associated with growth, engaging in eidetic reduction to
124 limit focus on the participant’s experiences of illusory growth. Specifically, Smith (2011)
125 asserts IPA is considered useful when exploring a complex or novel phenomenon and thus is

126 deemed appropriate in exploring the complexities of growth. Additionally, IPA is advocated
127 as a suitable methodology in similar growth research (e.g., Howells & Fletcher, 2016; Neely
128 et al., 2018). The researcher developed a double hermeneutic account of the athletes'
129 relatedness to growth-related experiences, interpreting the participants' experiences of their
130 own experiences (Smith, 2011). IPA recognises research as a dynamic process in which the
131 researcher has an integral role. In this way, as recommended by Biggerstaff and Thompson
132 (2008), the researcher placed a phenomenological emphasis on the athlete's experiential
133 concerns, while engaging in a careful and explicit interpretative analysis providing a critical
134 and conceptual commentary on the athlete's experiences. In adopting this attitude, it required
135 the researcher to engage in the epochē or bracketing, which is the temporary suspension of
136 taken-for-granted assumptions of a phenomenon, to arrive at the essential characteristics and
137 core psychological mechanisms of growth (Allen-Collinson & Evans, 2019).

138 **Participant Selection and Demographics**

139 The study utilised the purposeful sampling technique of criterion sampling (Morrow,
140 2005), where participants were required to meet predetermined criteria (i.e., elite athletes
141 who have experienced growth), in order to answer the research question. This fulfils
142 assumptions consistent with IPA research in obtaining a homogenous sample (Smith, 2011).
143 The sample included individuals over the age of 18 years who were a current or retired elite
144 athlete, and who had experienced growth.

145 The definition of an elite athlete has been met with considerable confusion. The
146 present study overcame research inconsistencies defining elite athletes based upon the
147 taxonomy developed by Swann et al. (2015). Utilising Swann et al.'s criteria, this study
148 obtained current or retired competitive-elite athletes (i.e., athletes who regularly compete at
149 the highest level in their sport, such as top leagues or Olympic Games, but have not had any

150 success at that level) and world class elite athletes (i.e., athletes with sustained success at the
151 highest level and repeated wins over a prolonged period of time).

152 As a criterion for participation was having experienced growth, the Stress-Related
153 Growth Scale-Revised (SRGS-R; Boals & Schuler, 2018) assessed growth among potential
154 participants, while minimising reports of illusory growth due to being less prone on picking
155 up these growth-related experiences in the questionnaire. Deriving from the former Stress-
156 Related Growth Scale (SRGS) which is a commonly used measure of posttraumatic growth,
157 the SRGS-R is a 15-item self-report questionnaire that provides a measure of growth among
158 individuals, with a Cronbach's alpha of 0.93 (Park et al., 1996). The SRGS-R is proposed as
159 a better measure of veridical growth, through reducing the tendency to report illusory growth
160 than the former SRGS. Response options ranged from -3 (*a very negative change*) to +3 (*a*
161 *very positive change*) with a possible range of outcome from -45 to +45. Incorporating the
162 SRGS-R in the purposeful sampling procedure acknowledged previous recommendations for
163 the need for valid and reliable measures to obtain participants who have reported
164 experiencing growth (Frazier et al., 2009). The type of stressor experienced was not used as a
165 criterion for inclusion or exclusion given the subjective evaluation of the demands of an
166 event which ultimately determines the event severity (Brewer, 1993). To ensure participant
167 responses represented significant stressful events to the individual, participants were
168 prompted to think back to a specific stressor, thus orientated towards a significant event when
169 completing the questionnaire. The type of stress-related events reported by the participants
170 included; divorce, chronic injury terminating the participant's sporting career,
171 underperformance at an Olympic Games, a career jeopardising error at a major competition,
172 deselection from a National Team and the breach of trust from a significant support giver.

173 The potential participants who received the SRGS-R consisted of 75 current or retired
174 elite athletes between the ages of 18 and 56 years ($M= 29.99$, $SD= 8.35$) and comprised of 32

175 males and 43 females. In line with the purpose of the study to compare the experiences of
176 those higher and lower in growth, extremities at the top and bottom 10 percent of the SRGS-
177 R were contacted via e-mail and invited to participant in the interview. Exploring the
178 experiences of those athletes who scored higher or lower on the SRGS-R helped to obtain
179 valid data regarding the reported experiences of growth, since they are more likely to
180 represent those who are high or low in the experience of growth. The first three participants
181 who expressed an interest in an interview at each extreme of the SRGS-R took part in the
182 interview. This process is advocated by similar participant selection processes within the
183 sport related growth literature (e.g., Galli & Reel, 2012; Hammer et al., 2017).

184 Of the participants eligible for inclusion, the final interview sample consisted of six
185 participants. This sample is consistent with Smith and colleagues' (2009) recommendation
186 for between 4 and 10 participants for an IPA study and is consistent with other published IPA
187 studies in the sport-related growth literature (e.g., Howells & Fletcher, 2016; Tamminen et
188 al., 2013). Additionally, this in line with the primary aim to provide a rich, detailed account
189 of individual experience in order to understand the complexity of the phenomenon.
190 Recruitment efforts resulted in five females and one male participating in the study, aged
191 between 25 and 46 years ($M= 33.33$, $SD= 8.43$). It is worth noting that despite the relative
192 equality in gender of the wider prospective participants, the final sample consisted of
193 predominantly females. Offering support to this gender split, Neely et al. (2020) commented
194 on the greater frequency of reported growth experienced by females than males. Of the
195 sample higher in reported growth, with an average score of 26.33 on the SRGS-R, two
196 athletes competed in rowing and one in triathlon, aged between 25 and 46 years ($M= 37$, $SD=$
197 8.83). Furthermore, two of these were current female athletes with one retired male athlete
198 and two athletes held a world class elite athlete classification while one held a competitive
199 elite classification. Of the sample lower in reported growth, with an average score of -7.67 on

200 the SRGS-R two athletes competed in gymnastics and one in rowing, aged between 25 and
201 34 years ($M= 29.7$, $SD= 4.51$). Furthermore, all athletes were female with one athlete a
202 current competitor and two recently retired, and one holding a world class elite athlete
203 classification while two held competitive elite classifications.

204 What follows are six short vignettes to introduce and describe the participants
205 including the respective nominated challenging and stressful experiences each participant
206 discussed throughout their interview. Athletes have been given pseudonyms and some details
207 of their experiences have been omitted to maintain anonymity. Athletes higher in their
208 experience of growth, indicated by being in the top 10% of the SRGS-R were Amber,
209 Gemma, and Sam. Amber was an international rower who had competed on the world stage
210 at international events. The nominated challenging and stressful experience Amber discussed
211 revolved around the selection criteria for competitions, and specifically, her de-selection from
212 a major competition which thus threatened her career within the sport. Gemma was an
213 international para-triathlete who competed for her country and had achieved Olympic medals
214 and World Records within her sport. The nominated challenging and stressful experience
215 Gemma discussed was her experience of a marriage break up and the lengthy divorce process
216 during her peak preparation for the Paralympic Games. Sam was an international rower, who
217 had competed at three Olympic Games and many World Rowing Championships. The
218 nominated challenging and stressful experience Sam discussed was failing to achieve his full
219 potential and expectation of a gold medal at an Olympic Games, winning a bronze medal and
220 not the anticipated gold medal.

221 Athletes lower in their experience of growth, indicated by being in the bottom 10% of
222 the SRGS-R were Sarah, Mary, and Natalie. Sarah was an international gymnast who
223 competed at the Olympic Games. The nominated challenging and stressful experience Sarah
224 discussed was her distrusting relationship with her coach, the toxic, perfectionistic, and

225 controlling culture that was created within the sport, and the impact this had on herself as a
226 person. Mary was an international rower who competed at one Olympic Games, countless
227 World Rowing Championships, and additional high profile rowing races. The nominated
228 challenging and stressful experience Mary discussed was her central involvement in
229 performing a race ending error at one of the major international competitions and the
230 subsequent feverous critique which ensued from both the public and sporting professionals.
231 Natalie was an international gymnast who had competed for her country at the
232 Commonwealth Games and numerous international competitions. The nominated challenging
233 and stressful experience Natalie discussed was the traumatic incur of an injury, her
234 progression through a long-term injury rehabilitation process, and the subsequent
235 unsuccessful return to gymnastics and thus retirement from her sport.

236 **Data Collection**

237 The approach taken for data collection was consistent with the researcher's
238 interpretivist epistemological position, focusing on understanding the meaning an individual
239 gives to their experiences and maintaining knowledge is developed through a process of
240 interpretation. Following institutional ethical approval, potential participants eligible for the
241 study were recruited through the researcher's existing contacts and through private messaging
242 on social media. Subsequently, snowball sampling recruited further athletes who fit the
243 inclusion criteria. Prior to and on the day of the interview, participants were assured of their
244 privacy, provided with an information sheet, the opportunity to discuss queries, and then gave
245 informed consent to participate. The participants were given choice over the interview
246 location taking place in person or via Skype. Participant choice in research is considered an
247 important element when exploring sensitive topics, encouraging an equal relationship
248 between the researcher and the participant (Hanna, 2012). Previous growth research has
249 recognised the importance of safeguarding participants to minimise the dangers which may

250 arise from re-visiting experiences which are potentially distressing (Day & Wadey, 2017).

251 This emphasises the importance of providing choice to facilitate participant control and

252 autonomy, while supporting the participant-led nature of the research (Smith, 2011).

253 Data were collected through individual semi-structured interviews conducted by the

254 lead author, consistent with interview approaches taken by other IPA researchers (Cottee-

255 Lane et al., 2004). Three interviews were conducted in person on campus at the university

256 and three interviews were conducted over Skype to accommodate distance and training

257 commitments. The semi-structured interview guide was created based on Smith's (2011)

258 guidance¹. The guide comprised four sections containing open-ended questions to allow for

259 flexibility in participant reflection, adaptability to the interview flow, and the development of

260 emerging areas of interest. In harmony with IPA research, the interview guide allowed

261 participants to express their own unique understandings of events, experiences, and states in

262 relation to growth (Smith & Osborn, 2004). The first section covered the introduction, with

263 an aim to build trust, rapport, empathy, and understanding of the participant's world. This has

264 been declared an important element when collecting potentially sensitive data, helping to

265 reduce tension (Bahn & Weatherill, 2013). The second and third sections focused on stressors

266 and growth-related experiences respectively. Informed by previous research, key indicators

267 of growth outlined by Howells and Fletcher (2016) were the focus. These indicators included,

268 for example, finding meaning, cognitive processing, and behavioural action. These were not

269 explicitly mentioned, rather, the questions explored a range of sensory perceptions and

270 mental phenomena including thoughts, memories, and associations surrounding growth. The

271 final section brought the interview to a close. Sample interview questions included: "Tell me

272 a little bit more about the nominated challenging experience?"; and "What, if anything, do

273 you think helped you the most during this time?". The interviews lasted between 45 and 70

¹ Interview guide is available on request from the corresponding author.

274 minutes, with the majority lasting approximately 55 minutes. All interviews were audio
275 recorded and transcribed verbatim.

276 **Data Analysis**

277 In recognition of quality phenomenological analysis pursuing a rich and complex
278 tradition, the researcher ensured consistent reflexivity throughout the process (Allen-
279 Collinson & Evans, 2019). Data were analysed in an iterative process on an idiographic case-
280 by-case basis in accordance with IPA steps guided by Smith and Osborn (2004). Analysis
281 began by listening to interview recordings and re-reading each transcript to empathically
282 understand the life-worlds of each participant and achieve a sense of familiarity of each
283 account. The second step involved noting initial significant associations, conceptual
284 meanings, linguistic tendencies, and descriptions associated with the athlete's growth and
285 experience of stressors. These loose annotations surrounding growth experiences were later
286 transformed into themes reflective of the individuals' accounts. Thirdly, preliminary notes,
287 impressions, and thoughts pertaining to each transcript were converted into emergent themes.
288 Step four explored the connections, conceptual similarities, and differences between themes
289 clustering them accordingly. As encouraged by Smith (1996), all participant transcripts were
290 analysed in a cyclical process, comparing cases and merging where appropriate. Finally,
291 through this inductive interrogation, patterns, connections, and differences in psychological
292 mechanisms influencing growth between all six cases were considered and highlighted
293 (Smith, 2004). In this way, the analysis resulted in three superordinate themes with a
294 collection of sub-categories pertaining to each theme which captured the participants'
295 experiences. Upon further drafts of the results, we combined the results and discussion to
296 provide not only our interpretations of the findings, but to engage in a dialogue between the
297 findings and existing literature. In doing so, we "chose not to have a clear demarcation
298 between these two sections and rather to relate themes to the extant literature", while

299 ensuring these themes are supported by rich material from the participants (Smith et al., 2009,
300 p. 113). This merged approach is advocated by Smith and colleagues' who suggest that in
301 combining the results and discussion "the second draft becomes more interpretative, there is
302 more of the researcher's thinking present" (p. 110).

303 In appreciation of the inherent characteristics of IPA research, during the analysis
304 process, the researcher took an active and inescapably significant role in the interpretation of
305 the data to make sense of the participants' experiences (Biggerstaff & Thompson, 2008). In
306 this way, the researcher can be considered part of the research itself in searching for meaning
307 and commonality beyond the phenomenological component to achieve a renewed insight into
308 the phenomenon (Krefting, 1991; Larkin et al., 2006). Alongside the dynamic position of the
309 researcher in the analysis, there is recognition of the need for reflexive engagement in order
310 to develop person-professional self-awareness of how researcher characteristics have the
311 potential to influence data analysis (Krefting, 1991). In consideration for "the need for acute,
312 sustained and thorough-going researcher reflexivity" (Allen-Collinson, 2016, p. 17), themes
313 were organised into a logical narrative, illustrated through the use of quotes. While
314 acknowledging one's theoretical and practical knowledge cannot be completely separate from
315 the interpretation, the researcher reflected upon their role in producing interpretations which
316 are grounded in the participant's views (Larkin & Thompson, 2012). During this process, as
317 recommended by Morrow (2005), bracketing was achieved through consistent engagement
318 with a reflexive journal to critically reflect on the self as the researcher, including noting any
319 emerging understandings. To produce an interpretative account, the analysis involved a
320 dialogue between the authors, the data, and their knowledge. In an attempt to overcome
321 criticisms of post-hoc evaluation through member checking (e.g., Birt et al., 2016; Morse et
322 al., 2002), we employed "member reflections" (Tracy, 2010, p. 844) or "participant feedback
323 on findings" (Levitt et al., 2018, p. 37) to enhance methodological integrity. In this way, a co-

324 participatory process and reflexive dialogue between the researchers and participants was
325 emphasised and used as a practical opportunity to explore other ways of knowing and add
326 depth to the data (Thomas, 2017), in appreciation of IPA's traditions (Smith, 2011).

327 **Methodological Integrity**

328 In terms of evaluating and judging the quality of qualitative research and
329 demonstrating that the claims made from the analysis are warranted, concerns exist regarding
330 scholars that "frequently utilize inflexible sets of procedures and provide contradictory
331 feedback" (Levitt et al., 2017, p. 2). Within the qualitative research literature in sport
332 psychology, these issues are further compounded by the varying use of related terms, such as
333 rigor, validity, trustworthiness, and credibility (Burke, 2016; Smith & McGannon, 2017;
334 Sparkes, 1998). To address the aforementioned concerns, the *American Psychological*
335 *Association Task Force on Resources for the Publication of Qualitative Research* proposed
336 the concept of *methodological integrity* and recommended its evaluation in qualitative
337 research via two composite processes: (a) fidelity to the subject matter, and (b) utility in
338 achieving research goals. Fidelity to the subject matter is the process by which researchers
339 develop and maintain allegiance to the phenomenon under study as it is conceived within
340 their tradition of inquiry. Utility in achieving research goals is the process by which
341 researchers select procedures to generate insightful findings that usefully answer their
342 questions (Levitt et al., 2017, 2018). In line with the above recommendations and associated
343 reporting standards, we employed the aforementioned bracketing as a reflexive approach
344 throughout the research process to help ensure that interpretations were not biased by our
345 own experiences, thinking, and understanding (Morrow, 2005). According to Ponterotto
346 (2006), a further tool to enhance credibility is to provide a 'thick description' encompassing
347 interpretations of the circumstances, meanings, intentions, strategies, and motivations of the
348 participant's experiences. This facilitates the reader's ability to reflect upon the research,

349 make associations, and generate vicarious connections with their own situations, thus raising
350 the naturalistic generalisability (Stake, 1995). Moreover, to ensure thick description and
351 research authenticity a fair and equal description of the participants' experiences is provided.
352 An authentic, in-depth account representing the participants' life-worlds in relation to the
353 phenomenon follows.

354 **Results and Discussion**

355 In exploring the experience of growth among elite sport performers as well as the
356 experiences of athletes who reported experiencing higher growth and those athletes who
357 reported experiencing lower growth, more differences than commonalities in the
358 psychological mechanisms were identified. For the purpose of this study, three superordinate
359 themes and respective subordinate themes, were identified as differentiators in the pathways
360 through which psychological mechanisms influenced growth between those athletes higher in
361 growth and those lower in growth. The themes include: (a) understanding of self, (b)
362 development in athletic identity, and (c) social support, with sub-themes therein. The findings
363 show that athletes at the highest level of reported growth in this population sample of elite
364 athletes, vary in their experiences of growth and, portentously, point to several salient
365 differentiators in underlying psychosocial mechanisms in this sample. Although previous
366 research has begun to identify a wide range of mechanisms and indicators of growth in
367 competitive sport (cf. Howells et al., 2017), our findings suggest that understanding of self,
368 development in athletic identity, and social support are pivotal aspects of the "transitional
369 process" (Howells & Fletcher, 2015, p. 43) that facilitates or instigates growth in elite sport
370 performers.

371 **Understanding of Self**

372 Understanding of self was identified as a fundamental differentiator between athletes
373 with higher and lower levels of reported growth. The athletes higher in reported growth

374 illustrated more advanced self-awareness and self-regulation (Moshman, 2018). These two
375 concepts have been termed metacognitive knowledge and metacognitive regulation
376 respectively in the wider psychology literature (Flavell, 1979).

377 *Self-awareness*

378 Through their reflections on their stressor experiences, participants showed
379 understanding and awareness of their own thoughts. Interestingly, analysis identified distinct
380 differences in the level of self-awareness between those higher and lower in reported growth,
381 evidenced by the athlete's level of cognitive processing and their ability to plan, monitor, and
382 assess their experiences. Athletes higher in reported growth reported repeated engagement in
383 voluntary and purposeful cognitions as a means to understand the adverse event. The athletes
384 spoke with greater depth, awareness, and criticality of their experience, exemplified in
385 Amber's effort to overcome her distress:

386 The memory of it hurts, I don't want to deal with that again, so I understand what
387 went well, what didn't, even if we got a medal. How could we improve? Trying to
388 stay in touch with and connected with the coaches. To try and do a number of things
389 to give myself the edge, understanding the competition, making sure I'm not putting a
390 foot wrong every day in training. Doing the one percenters I guess.

391 Amber displayed an ability to evaluate what caused her distress, knowledge of her
392 emotional states, and motivations for continuing in her sport. The depth of Amber's self-
393 awareness and compelling understanding of her stressor is suggested through the language
394 used to express herself. Amber's analogy intended to convey her feelings of acceptance of the
395 stressor and the distress she experienced highlights her thorough cognitive processing around
396 the event: "It's a bit like seeing an ex-boyfriend and their new partner and obviously you
397 know it's going to happen one day, but it still hurts." On the contrary, those lower in reported
398 growth presented more automatic and unwelcomed persistent thoughts. This was marked by

399 the absence of any resolution or completion of the event related cognitive processing. The
400 reworking of Sarah's thoughts is shown as she reported:

401 I definitely would have done something if it needed to be done but maybe it did need
402 to be done, I don't know, maybe it would have stopped some of the eating issues they
403 had but I was young without a proper support network what are you meant to do?

404 The shift in language from a first-person pronoun to second-person pronoun indicated
405 Sarah's attempt to protect herself from the distressing memories and remain distanced from
406 the experience. Furthermore, the lack of forthcoming resolution was demonstrated by the use
407 of forceful rhetorical questioning and thus suggestive of her abandonment in finding
408 meaning. Similarly, when prompted by the researcher to elaborate on how her stressor had
409 encouraged learning, Mary's lack of evaluative depth indicated little self-awareness: "I think
410 it has helped for me to put things into perspective." It was apparent that the temporal nature
411 of thought processing was important in the growth-related experiences of the athletes, with
412 the passage of time fostering event related cognitive processing and thus facilitating higher
413 levels of growth. As a consequence of the all-encompassing nature of sport in her life, the
414 lack of time away from her experience, sustained Natalie in a state of persistent cognitions
415 which hindered her ability to rationalise the event:

416 I could never really completely get away from it, it's all I thought about outside, like
417 I'm not a gymnast anymore, who am I, I want to be doing it. When I was trying to
418 take my mind off it and do my studies, but I was learning about sport so it was a thing
419 I couldn't avoid. So then I think that put me in a place of resentment to my course, for
420 instance, I hate the course, I hate my sport, what am I?

421 Nonetheless, the athletes reporting purposeful thoughts referenced initial intrusive
422 thoughts and images surrounding their event. It appears initial intrusive reflection suggests
423 cognitive processing, preparing an individual to engage in subsequent intentional attempts to

424 deliberately assess the event. This is demonstrated in Sam's description of his actions after
425 his team underperformed at the Olympic Games: "for the short term, fairly unhealthy
426 forgetting about it, going out, getting drunk, enjoying the party of the Olympics for a week
427 and then coming back and having a bit of a mental break from it." The mental break allowed
428 Sam time to reconnect with his experience, driving him to take action: "I'm not sure if it was
429 my fault or someone else's, the best way to find out was to do it myself, if I do it on my own
430 then I'll know everything that happens is down to me." Over time, Sam suggested he found
431 significance in his stressor characterised by a new motivation for his sport and desire to learn.

432 Underpinned by Joseph and Linley's (2005) theoretical explanation and supporting
433 previous research illustrating the role of purposeful and voluntary cognitions in sport, termed
434 deliberate rumination, (e.g., Howells & Fletcher, 2016), this study found greater conscious
435 and repetitive engagement to meaningfully understand the event-related information. This
436 enabled athletes to re-establish their self-schema consistent with their organismic experience
437 (Hammer et al., 2017). On the contrary, as shown in the wider psychology literature (e.g.,
438 Calhoun et al., 2000), persistent and long-term engagements with unsolicited thoughts about
439 the event, termed intrusive ruminations, were found to hinder personal development, growth,
440 and the search for a better understanding of the adverse experience. Nevertheless, the
441 conceptual role of deliberate and intrusive ruminations and their relationship with growth has
442 been met with debate in the literature (Cann et al., 2011). While the notion of intrusive
443 ruminations is often accompanied with negative connotations, empirical work has challenged
444 theorists to reconceptualise the role of intrusions as playing a positive role in growth
445 (Stockton et al., 2011). Congruent with Cann et al.'s suggestions and reinforcing Triplett et
446 al.'s (2012) findings, this study illustrates the initial adaptive and beneficial role of intrusive
447 ruminations in allowing detachment from the event and initiation of the growth process.
448 Following this period of contemplation, an increase in effortful cognitive processing through

449 deliberate rumination allowed athletes to intentionally assess the event and provide an
450 opportunity to realise growth (Helgeson et al., 2006). In this way, this study provides support
451 that intrusive ruminations, shortly replaced by deliberate ruminations, are fundamental for
452 growth.

453 *Self-regulation*

454 In further exploration of understanding of self, distinct differences in the self-

455 regulatory skills of athletes were shown to be associated with the level of reported growth.

456 Providing an enhanced understanding to the current sport related growth literature, athletes

457 higher in reported growth showed greater engagement and utilisation of adaptive coping

458 strategies to manage thoughts, emotions, and behaviours (Howells & Fletcher, 2015).

459 Participants reflected on their ability to choose an appropriate strategy to manage thoughts,

460 emotions, and behaviour. Distinct differences in the level of self-regulation were interpreted

461 between the individuals displaying higher and lower levels of growth, evidenced through

462 their use of long-term coping strategies. For example, following the stressor of divorce,

463 Gemma initially disregarded the impact of her marriage separation, commenting; "I put on a

464 front because I did just mentally box it away. I didn't address the things that needed to be

465 addressed." Despite this, the initial distance from the event gave Gemma time for reflection,

466 enabled her to rationalise her feelings, and allowed her to engage in proactive techniques to

467 cope with the separation:

468 I would say to anybody, actually rationalise these things and ask what is the worst that

469 can happen and if that isn't being homeless or without things that are quite

470 fundamental to your health, then why don't you just go for it? Then, if that didn't

471 work I made another plan and got really excited about that plan B, it means that I get

472 on with the rest of my life.

473 Gemma's positive reappraisal of her stressor illustrated a shift from event-avoidance
474 in protection of her identity, to a reflective desire to accept and find meaning in the stressor.
475 The modification of her previously held beliefs about the world, into a new worldview as a
476 result of her experience, is illustrative of Gemma experiencing growth. Contrastingly,
477 athletes displaying lower levels of reported growth presented greater avoidance strategies.
478 Sarah demonstrated avoidance and denial throughout the interview, revealed in her attempt to
479 maintain her beliefs and views of the world in her already existing models of the world,
480 rather than the creation of new worldviews, as indicated by Gemma. In an attempt to protect
481 her self-esteem and escape confronting her stressor, the author interpreted Sarah's statements
482 as a projection of her feelings onto her support network, blaming her coaches and the culture
483 of her sport for the consequences of her stressor:

484 He wouldn't have been able to do anything about the situation, this is the way the
485 sport runs anyway, it was a surprise but not a surprise at the same time. I think we
486 literally knew it was going to be hard on us anyway.

487 In the wider growth literature, Hobfoll et al. (2007) propose in addition to the search
488 for meaning, the transformation of these growth cognitions into growth actions are imperative
489 in an individual understanding and overcoming their stressful experiences. This research
490 supports the criticality of this action-focused coping as central in helping athletes overcome
491 these experiences through the incorporation of actions which represent growth, such as
492 planning, preparing, and anticipation (Hobfoll et al., 2007). Thus, in depth self-awareness of
493 an experience is transformed into action through one's ability to engage in self-regulation.
494 Offering novel suggestions to the sport literature and drawing upon new contributions in the
495 wider growth literature by Boerner et al. (2020), this study shows support for the theoretical
496 contention that growth is facilitated through low levels of defensive processes and high levels
497 of mature defence mechanisms (Vaillant, 1995). Mature defence mechanisms are

498 characterised by adaptive processes such as sublimation and anticipation, which do not distort
499 inner and outer reality. In turn, mature defence mechanisms may help facilitate an individual
500 to reach higher levels of awareness and integrate their adverse experiences into a revised self-
501 schema (Joseph & Linley, 2005). On the contrary, athletes displaying lower experiences of
502 growth showed greater avoidance coping strategies through behavioural disengagement and
503 states of denial, highlighted by the lack of acceptance of the consequences of their stressor
504 (Cann et al., 2011; Howells & Fletcher, 2016). Developing theoretical understanding of
505 growth in sport, in consideration of Boerner et al.'s suggestions, lower levels of reported
506 growth are suggestive of increased defensiveness and greater distortion of reality through
507 immature defence mechanisms. Immature defence mechanisms are characterised by
508 processes such as denial and the displacement of emotions onto others (Vaillant, 1995). In
509 this way, defence mechanisms ward off stressors in protections of one's well-being and self-
510 esteem, and thus stress-related experiences cannot be integrated into a current schema
511 (Joseph & Linley, 2005). Nonetheless, offering new suggestions highlighting the important
512 role of both adaptive and avoidance coping strategies, this study finds support for the flexible
513 and situationally dependent use of strategies (Kunz et al., 2018). Furthermore, in reference to
514 Joseph and Linley's organismic valuing theory of growth, these findings illustrate how
515 avoidance strategies are a valuable component of the growth process. In the short-term, these
516 strategies allow an athlete to both experience the emotional distress, which is an integral part
517 of the growth process, as well as manage their distress to a comfortable level where they feel
518 able to confront the event, thus preparing the athlete for adaptive behavioural action.

519 **Development in Athletic Identity**

520 The second key differentiator in athletes with higher and lower levels of growth was
521 reflected in the development of one's athletic identity. The participants displayed differences
522 in the development and understanding of their identity as an athlete and ultimately, how they

523 define themselves in relation to their sport. In the sport psychology literature, one's athletic
524 identity refers to the degree to which an athlete identifies with the athlete role (Brewer et al.,
525 1993; Sinclair & Orlick, 1993). Specifically, an athletic identity can range from an exclusive
526 athletic identity, with an individual's self-identity deriving exclusively from the athlete, to a
527 broader athletic identity, derived from the openness to explore different roles and behaviours
528 (Grove et al., 1997). The athletes exhibiting higher levels of reported growth showed greater
529 openness to experience, judgements based upon their internal instincts, emotions, and beliefs,
530 and gratitude for their stressor experience. For instance, throughout Gemma's interview,
531 there was a passionate focus upon her identity and core beliefs: "I had a great career but I
532 wasn't happy doing it, it really didn't fulfil me. I was being satisfied, but not being fulfilled
533 in my life." This supports previous research on the broadening of one's identity (e.g. Schinke
534 et al., 2018) and specifically, the functional role of openness to new experience in the two-
535 component model of growth (e.g., Zoellner & Maercker, 2006). As Gemma commented on
536 her departure from "a safe and secure future, to the complete unknown," she highlighted her
537 openness to experience something new, confidence in her ability to succeed, and her internal
538 locus of evaluation. She said, "I truly believe that if you commit yourself to what you're
539 doing, do everything in your control to make things happen and focus your energy upon
540 yourself, then things tend to work out." Similarly, through the ability to reflect, question, and
541 evaluate his experience, Sam commented on how his openness to experiences and desire to
542 lead a meaningful life congruent with his intrinsic values encouraged the restructure of his
543 identity:

544 I reshaped my identity on the back of the experience I'd had, I was deliberate about
545 who I wanted to be, who I wanted to spend my time with... and my belief went from
546 Sam who's good at rowing, who's got this ergo record to Sam who's a good friend,
547 husband and brother... that's quite a nice and different thing to be really.

548 It was interpreted, the appreciation for one's experiences combined with the search
549 for satisfaction and meaning in life propelled the athletes to grow from their stressor. This is
550 suggested in Sam's expression: "I took back control of everything that happened... I was
551 100% everything and that felt good." The confidence in the athletes' sporting ability
552 encouraged them to take responsibility for their experience and make a change in harmony
553 with their beliefs and values in order to progress.

554 Building upon contentions identified by Howells and Fletcher (2016), openness to
555 experience augmented an athlete's motivation to take behavioural action and act in
556 congruence with their personal virtues and intrinsic values. Greater emphasis was placed on
557 the desire for self-fulfilment, which aligns with the theory of self-actualisation (Rogers,
558 1967). The emphasis placed on self-fulfilment extending beyond one's sporting interest,
559 confers with athletic identity literature identifying an athlete's athletic identity as an
560 important determinant of adjustment and level of coping resources (Sinclair & Orlick, 1993;
561 Taylor et al., 2005). This notion is consistent with reports that growth is reflected in the
562 search for eudaimonic well-being which is associated with finding meaning and purpose in
563 life, as opposed to hedonic well-being which is associated with balancing affective states and
564 achieving satisfaction (Joseph & Linley, 2005). During her effort to return to her team,
565 Amber expressed the lack of value and respect for her as an athlete encouraged her to seek
566 different opportunities:

567 The chief coach always said the door would always be open in the first two years of
568 being in the Olympics and he basically closed the door to a tiny crack, so I felt I
569 would shut the door as it wasn't really open in the first place.

570 The personality characteristics of the athletes lower in reported growth were
571 associated with a greater sense of distorted optimism surrounding their experience,
572 judgements based upon external factors, and negative humour. Natalie commented on how

573 she recognised her retirement from injury was imminent, nevertheless still “held onto that
574 little bit of hope that maybe they’d find something that helps with the injury.” Natalie’s
575 extreme optimism intertwined with fear of losing her athletic identity hindered her
576 acceptance of the stressor, delayed her behavioural action, and thwarted her self-
577 development: “I was just too scared to turn around and say this wasn’t going to happen, so I
578 kept holding on and holding on.” Her search for happiness through continued participation in
579 sport outweighed her desire to find meaning through the stressor. It was interpreted that lower
580 self-confidence increased the reliance upon social comparison and encouraged the derogation
581 of the athlete’s experiences in order to find happiness. This is suggested in Sarah’s defensive
582 alteration of her perceptions of the event: “it seems so silly” and “I laugh at it now, so stupid,
583 just a stupid thing that happened,” and further shown as she attempted to normalise her
584 experience: “it probably happens in all other sports as well I bet.” It is proposed this
585 represents the countering of Sarah’s extreme emotions in order to give the illusion she has
586 positively changed. In an attempt to protect her self-esteem when discussing her experience,
587 Sarah sarcastically reported “I wasn’t to know how the body worked and apparently they
588 didn’t know either”. This negative use of humour is interpreted as Sarah’s continual
589 emotional discomfort with the experiences and persisting resentment towards the individuals
590 involved. In line with these accounts, the athletes lower in reported growth showed greater
591 unrealistic optimism. Nonetheless, the role of optimism in promoting growth has received
592 scholarly debate (e.g., Helgeson et al., 2006; Roy-Davis et al., 2017). This study supports
593 Howells and Fletcher’s (2016) findings and Zoellner and colleagues’ (2008) contentions that
594 overly optimistic accounts reflect distorted illusions of an adversity. From this perspective,
595 optimism can thwart an athlete’s acceptance of an event and hinder action to overcome the
596 event, thus maintain an athlete in a state of denial and potentially prevent growth.

597 **Social Support**

598 Finally, athletes higher in reported growth demonstrated more positive perceptions
599 regarding their social support network and demonstrated greater action towards harnessing
600 the support around them. Our interpretation suggested verbal disclosure of thoughts and
601 feelings to trusted individuals had an important influence on Gemma's appraisal of her
602 stressor because it appeared to trigger a shift from emotional suppression to emotional
603 disclosure. Gemma stated, "I never really opened up about a lot, I was worried... from
604 working with the psychologist I gained perspective and having those conversations helped."
605 The ability to reach out to individuals who showed affinity to the athlete's stressor provided
606 greater social support satisfaction, as Amber explained: "she knows what it's like to deal with
607 disappointment." It was apparent that empathy, relatedness, and mutual understanding were
608 important in facilitating an athlete's progression. On two occasions, Mary explained how
609 support from an individual with a similar experience was the catalyst for her subsequent
610 return to sport: "we both found it really hard we supported each other" and "he said to me
611 that he got over it and I could get over it and be better." Although previous studies in sport
612 have consistently found social support to be related to growth (e.g., Howells & Fletcher,
613 2016), this study extends the current literature base pertaining to how social support
614 influences growth within sport. In line with Joseph and Linley's (2005) organismic valuing
615 theory, the athletes in our study stated support satisfaction was moderated by the degree of
616 empathy, trust, and similarity between the athlete and support network. Interestingly, Leppma
617 et al., (2018) found the level of reported social support was positively related to the
618 experience of posttraumatic growth in a sample of police officers, while Sheikh (2008) noted
619 in a sample of trauma survivors, social support satisfaction was influential in determining
620 their level of growth.

621 On the contrary, it appeared athletes lower in reported growth displayed fragmented
622 relationships with key stakeholders in their sporting careers. This was characterised by a lack

623 of trust and kinship. The stark absence of social support was evident throughout Sarah's
624 interview as she described her relationships with her support staff and family. In terms of
625 support staff, Sarah reported, "we had the coach who we didn't talk to at all really," and "the
626 psychologist who knew something was up but when I went into a meeting with her and said I
627 was fine and leave within 5 minutes." The support was similar with her family when she
628 stated, "we [teammates] never told our parents anything because I think I was of an age
629 where I didn't want them to worry about what was happening". Even when there was some
630 support available, Sarah's perception of its low value and reliability perpetuated her isolation
631 and hindered her growth. Interestingly, despite referencing a strong perceived social network
632 with her family and friends, Natalie referred to the difficulty in confiding with those who
633 had limited similar experiences: "I spoke with my parents and they did everything they could
634 to help but they didn't quite have that first-hand knowledge of the extent of how hard it was."
635 She further spoke about the effect the reduction of support from her coaches had on her self-
636 esteem:

637 My coach both at University and home just seemed to forget about me, it was hard.
638 My University coach is still supportive, just sometimes I feel like I'm not worthy of
639 his time because I'm injured which I guess is a bit frustrating when he doesn't quite
640 get what I'm saying.

641 An important finding to note is that it was interpreted support satisfaction was
642 enhanced by the level of verbal disclosure of adverse experiences between an athlete and
643 support network, which was enabled by the empathy and trust within their relationship. With
644 this in mind, it is proposed that verbal disclosure serves as a catalyst for understanding one's
645 sense of self in a relationally safe environment, promoting the conversion of cognitive
646 processing into appropriate actions. In concurrence with Salim and Wadey's (2018) findings,
647 the sharing of athlete narratives and perspectives of their experiences ultimately enables

648 positive accommodation, that is the modification of previously held beliefs about the world
649 into a new self-schema and new worldview as a result of experiences, and thus the
650 development of growth (Joseph & Linley, 2005). In support of Joseph and Linley, this is in
651 contrast to the assimilation of experiences, that is the maintenance of beliefs and views of the
652 world into pre-existing existing models of the world, which are not as supportive of the
653 growth process. This is a notable acknowledgment given findings by Brown et al. (2018) that
654 social support which encourages the positive reappraisal of one's sense of self, is crucial in
655 the successful transition into retirement by elite athletes. Adding to the growth literature in
656 sport, this study emphasises that the role of social support extends beyond the exchange of
657 resources and objective level of available support to the athlete. Rather, it is interpreted social
658 support centres on the satisfaction of the support to the individual and it is through these
659 trusting and empathic relationships an athlete is encouraged to verbally disclose their stress-
660 related experiences to allow for the positive reappraisal of their sense of self. Interestingly,
661 wider growth literature shows support for the role written disclosure may have on fostering
662 growth, particularly in shaping an individual's future thinking (viz., Roepke et al., 2017).
663 Exploration of written disclosure in encouraging the translation of growth cognitions into
664 actions would be a valuable avenue to further explore.

665 A consistent finding throughout the three identified mechanisms (understanding of
666 self, development in athletic identity, and social support) is their cumulative influence in
667 supporting an individual to purposefully process their event information, meaningfully act in
668 line with their intrinsic values, and ultimately, find meaning in their experience. Incidentally,
669 this research encourages the view that, with appropriate psychological support, the
670 experience of stressors can result in positive changes and be used as a springboard towards
671 personal growth (Howells et al., 2017).

672 **Strengths, Limitations, and Future Research**

673 Notwithstanding the benefits of IPA research, Brocki and Wearden (2006) emphasise
674 the importance of recognising the limits to the representational nature of IPA findings. In
675 consideration of this, the reliance upon retrospective accounts of growth at a snapshot in time
676 limits the ability to fully understand the multidimensional nature and temporal aspects
677 relating to how an athlete evolves through the growth process. Consistent with previous
678 limitations raised by scholars in the domain (e.g., Day & Wadey, 2017; Howells et al., 2017;
679 Neely et al., 2018), achieving a more comprehensive understanding of the phenomenon
680 through longitudinal research engaging participants on multiple occasions would be valuable.
681 Prolonged engagement could illuminate additional intricacies of stress-related growth which
682 are yet to be captured due to the restrictions on cultural and contextual depth that can be
683 obtained through methodological processes collecting single time point data. Overcoming the
684 dearth of longitudinal studies, Brewer et al., (2017) are the first to explicitly investigate
685 adversarial growth following sport injury and highlight the value in engaging in longitudinal
686 research to understand the complexities of growth. Additionally, the current research sample
687 included predominately female elite athletes. In appreciation of Neely and colleagues' (2020)
688 calls for future research to explore the nuanced experiences of growth in males and females,
689 we recognise our research mainly focused on the reported experience of growth in females.
690 Accordingly, this may limit the application of the findings in better understanding the
691 knowledge of how males and females respond to stressful stimuli and the subsequent
692 psychological mechanisms to facilitate growth.

693 Despite the aforementioned limitations, this research provides valuable contributions
694 to the growth literature within sport and exercise psychology. Through developing a deeper
695 and enriched understanding of the differentiating factors between elite athletes experiencing
696 higher and lower reported levels of growth, this situates practitioners in a stronger position to
697 close the gap between theory and practice (Roy-Davis et al., 2017). As such, the research

698 advances previous studies focusing on outcomes of growth, assisting in explaining *how* to
699 promote growth while also providing the foundations for subsequent intervention studies to
700 explore how to integrate the concept into professional practice.

701 Building upon this, future research should focus on advancing our knowledge of
702 empirical intervention work which best facilitates the development of high levels of growth
703 among athletes. It is crucial to help athletes and support staff in understanding how to apply
704 growth findings into facilitative sport performance environments (Howells et al., 2017). As
705 commented by Howells and colleagues (2020), although there has been significant
706 advancements in both the conceptual and theoretical understanding of growth, there are
707 limited intervention studies which aim to promote growth in sport (Salim & Wadey, 2018;
708 2019). Moreover, the intervention studies aimed at promoting growth in the wider growth
709 literature have shown mixed efficacy (cf. Howells et al., 2020). In helping contribute to
710 research addressing the genuine unknowns of how to promote growth following negative
711 experiences, as noted by Howells and colleagues, this paper offers suggestions of which
712 psychological mechanisms are important to enhance, build, and develop within athletes. In
713 doing so, this offers suggestions of pre-stressor, proactive approaches to building
714 psychological skills which could help an individual better cope with future stressful
715 experiences, and thus, help facilitate growth from their experience. Specifically, to increase
716 self-awareness and self-regulation, coaches, practitioners, and other members of the support
717 team could play a role in encouraging athletes to engage in consistent, future orientation
718 reflections to guide and shape athlete thinking patterns. Secondly, considering the role of an
719 individual's athletic identity, focus could be placed on understanding personal values, with a
720 focus on an appreciative enquiry into what the athlete finds meaningful and purposeful.
721 Finally, in recognition of the psychological mechanism, social support, providing time and
722 space for athletes to verbally share their personal narratives and experiences of events to

723 trusting individuals who hold similar interests or values, may be a practical suggestion to
724 facilitate growth. This suggested application is in support of Orille and colleagues' (2020)
725 finding that enhancing relatability through offering peer-support groups may provide a
726 practical inroad towards effective interventions which foster growth. Despite debated
727 efficacious results, scholars found support for individual, complex, and nuanced approaches
728 to growth which emphasise the need for long-term tailored interventions specific to each
729 individual and their situational demands.

730 **Conclusion**

731 In conclusion, through interpretative phenomenological analysis of the lived
732 experiences of elite athletes who have experienced growth, this study has advanced the
733 current state of research. This research has identified the key psychological mechanisms
734 which differentiate elite athletes who have experienced higher and lower levels of reported
735 growth. It is interpreted that understanding of self, development in athletic identity, and
736 social support are mechanisms which work together to assist an individual in accommodating
737 their experiences into a revised self-schema to allow for the optimal experience of growth.
738 Importantly, the journey towards growth is found to be an evolving, dynamic process, with
739 the potential to result in an array of positive benefits if accompanied with the appropriate
740 psychological underpinnings. The largest challenge presents in exploring how best to
741 translate theoretical explanations and understandings into efficacious interventions and
742 professional practice.

743 References

- 744 Allen-Collinson, J. (2016). Breathing in life: Phenomenological perspectives on sport and
745 exercise. In B. Smith & A. C. Sparkes (Eds), *Routledge handbook of qualitative*
746 *research in sport and exercise* (pp. 11–23). London: Routledge.
- 747 Allen-Collinson, J., & Evans, A. (2019) To be or not to be phenomenology: That is the
748 question. *European Journal for Sport and Society*, 16(4), 295-300.
749 doi:10.1080/16138171.2019.1693148
- 750 Arnold, R., & Fletcher, D. (2021). Stressors, hassles, and adversity. In R. Arnold & D.
751 Fletcher (Eds.), *Stress, well-being, and performance in sport* (pp. 31-62). Abingdon,
752 UK: Routledge.
- 753 Bahn, S., & Weatherill, P. (2013). Qualitative social research: A risky business when it
754 comes to collecting 'sensitive' data. *Qualitative Research*, 13(1), 19-35.
755 doi:10.1177/1468794112439016
- 756 Biggerstaff, D., & Thompson, A. R. (2008). Interpretative phenomenological analysis (IPA):
757 A qualitative methodology of choice in healthcare research. *Qualitative Research in*
758 *Psychology*, 5(3), 214-224. doi:10.1080/14780880802314304
- 759 Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool
760 to enhance trustworthiness or merely a nod to validation? *Qualitative Health*
761 *Research*, 26(13), 1802-1811. doi:10.1177/1049732316654870
- 762 Boals, A., & Schuler, K. L. (2018). Reducing reports of illusory posttraumatic growth: A
763 revised version of the Stress-Related Growth Scale (SRGS-R). *Psychological*
764 *Trauma: Theory, Research, Practice, and Policy*, 10(2), 190-198.
765 doi:10.1037/tra0000267

- 766 Boerner, M., Joseph, S., & Murphy, D. (2020). A theory on reports of constructive (real) and
767 illusory posttraumatic growth. *Journal of Humanistic Psychology*, *60*(3), 384-399.
768 doi:10.1177/0022167817719597
- 769 Brewer, B. W. (1993). Self-identity and specific vulnerability to depressed mood. *Journal of*
770 *Personality*, *61*(3), 343-364. doi:10.1111/j.1467-6494.1993.tb00284.x
- 771 Brewer, B.W. (2007). Psychology of sport injury rehabilitation. In G. Tenenbaum & R. C.
772 Eklund (Eds.), *Handbook of Sport Psychology* (3rd ed., pp. 404–424). Hoboken, NJ:
773 Wiley.
- 774 Brewer, B. W., Cornelius, A. E., Van Raalte, J. L., & Tennen, H. (2017). Adversarial growth
775 after anterior cruciate ligament reconstruction. *Journal of Sport and Exercise*
776 *Psychology*, *39*(2), 134-144. doi:10.1123/jsep.2016-0210
- 777 Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscles
778 or Achilles heel? *International Journal of Sport Psychology*, *24*(2), 237–254.
- 779 Brocki, J. M., & Wearden, A. J. (2006). A critical evaluation of the use of interpretative
780 phenomenological analysis (IPA) in health psychology. *Psychology and*
781 *Health*, *21*(1), 87-108. doi:10.1080/14768320500230185
- 782 Brown, J., Sarkar, M., & Howells, K. (2020). Growth, resilience, and thriving. A jangle
783 fallacy? In R. Wadey, M. C. Day, & K. Howells. (Eds.), *Growth following adversity*
784 *in sport: A mechanism to positive change* (pp. 59-72). New York, UK: Routledge.
- 785 Brown, C. J., Webb, T. L., Robinson, M. A., & Cotgreave, R. (2018). Athletes' experiences
786 of social support during their transition out of elite sport: An interpretive
787 phenomenological analysis. *Psychology of Sport and Exercise*, *36*, 71-80.
788 doi:10.1016/j.psychsport.2018.01.003
- 789 Burke, S. (2016). Rethinking 'validity' and 'trustworthiness' in qualitative inquiry: How
790 might we judge the quality of qualitative research in sport and exercise sciences? In

- 791 B. Smith & A. C. Sparkes (Eds.), *Routledge handbook of qualitative research in sport*
792 *and exercise* (pp. 330–339). London: Routledge.
- 793 Calhoun, L. G., Cann, A., Tedeschi, R. G., & McMillan, J. (2000). A correlational test of the
794 relationship between posttraumatic growth, religion, and cognitive
795 processing. *Journal of Traumatic Stress, 13*(3), 521-527.
796 doi:10.1023/A:1007745627077
- 797 Cann, A., Calhoun, L. G., Tedeschi, R. G., Triplett, K. N., Vishnevsky, T., & Lindstrom, C.
798 M. (2011). Assessing posttraumatic cognitive processes: The event related rumination
799 inventory. *Anxiety, Stress, & Coping: An International Journal, 24*(2), 137-156.
800 doi:10.1080/10615806.2010.529901
- 801 Cottee-Lane, D., Pistrang, N., & Bryant-Waugh, R. (2004). Childhood onset anorexia
802 nervosa: The experience of parents. *European Eating Disorders Review: The*
803 *Professional Journal of the Eating Disorders Association, 12*(3), 169-177.
804 doi:10.1002/erv.560
- 805 Crawford, J. J., Gayman, A. M., & Tracey, J. (2014). An examination of post-traumatic
806 growth in Canadian and American ParaSport athletes with acquired spinal cord
807 injury. *Psychology of Sport and Exercise, 15*(4), 399-406.
808 doi:10.1016/j.psychsport.2014.03.008
- 809 Day, M. C., & Wadey, R. (2017). Researching growth following adversity in sport and
810 exercise: Methodological implications and future recommendations. *Qualitative*
811 *Research in Sport, Exercise and Health, 9*(4), 499-513.
812 doi:10.1080/2159676X.2017.1328460
- 813 Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–
814 developmental inquiry. *American Psychologist, 34*(10), 906-911. doi:10.1037/0003-
815 066X.34.10.906

- 816 Fletcher, D. (2019). Psychological resilience and adversarial growth in sport and
817 performance. In E.O. Acevedo (Ed.), *The Oxford Research Encyclopedia of Sport,*
818 *Exercise, and Performance Psychology* (pp. 731 – 756). New York City, NY: Oxford
819 University Press.
- 820 Fletcher, D., Hanton, S., & Mellalieu, S.D. (2006). An organisational stress review:
821 Conceptual and theoretical issues in competitive sport. In S. Hanton & S. D. Mellalieu
822 (Eds.), *Literature reviews in sport psychology* (pp. 321-374). Hauppauge, NY: Nova
823 Science.
- 824 Frazier, P., Tennen, H., Gavian, M., Park, C., Tomich, P., & Tashiro, T. (2009). Does self-
825 reported posttraumatic growth reflect genuine positive change? *Psychological*
826 *Science, 20*(7), 912-919. doi:10.1111/j.1467-9280.2009.02381.x
- 827 Galli, N., & Reel, J. J. (2012a). Can good come from bad? An examination of adversarial
828 growth in Division I NCAA athletes. *Journal of Intercollegiate Sport, 5*(2), 199-212.
829 doi:10.1123/jis.5.2.199
- 830 Galli, N., & Reel, J. J. (2012b). 'It was hard, but it was good': A qualitative exploration of
831 stress-related growth in Division I intercollegiate athletes. *Qualitative Research in*
832 *Sport, Exercise and Health, 4*(3), 297-319. doi:10.1080/2159676X.2012.693524
- 833 Grove, J. R., Lavallee, D., & Gordon, S. (1997). Coping with retirement from sport: The
834 influence of athletic identity. *Journal of Applied Sport Psychology, 9*(2), 191-203.
835 doi:10.1080/10413209708406481
- 836 Hammer, C., Podlog, L., Wadey, R., Galli, N., Forber-Pratt, A. J., Newton, M., ... &
837 Greviskes, L. (2017). Understanding posttraumatic growth of paratriathletes with
838 acquired disability. *Disability and Rehabilitation, 15*, 1-9.
839 doi:10.1080/09638288.2017.1402961

- 840 Hanna, P. (2012). Using internet technologies (such as Skype) as a research medium: A
841 research note. *Qualitative Research*, 12(2), 239-242. doi:10.1177/1468794111426607
- 842 Helgeson, V. S., Reynolds, K. A., & Tomich, P. L. (2006). A meta-analytic review of benefit
843 finding and growth. *Journal of Consulting and Clinical Psychology*, 74(5), 797-816.
844 doi:10.1037/0022-006X.74.5.797
- 845 Hobfoll, S., Hall, B., Canetti-Nisim, D., Galea, S., Johnson, R., & Palmieri, P. (2007).
846 Refining our understanding of traumatic growth in the face of terrorism: Moving from
847 meaning cognitions to doing what is meaningful. *Applied Psychology*, 56(3), 345-366.
848 doi:10.1111/j.1464-0597.2007.00292.x
- 849 Howells, K., & Fletcher, D. (2015). Sink or swim: Adversity-and growth-related experiences
850 in Olympic swimming champions. *Psychology of Sport and Exercise*, 16(3), 37-48.
851 doi:10.1016/j.psychsport.2014.08.004
- 852 Howells, K., & Fletcher, D. (2016). Adversarial growth in Olympic swimmers: Constructive
853 reality or illusory self-deception? *Journal of Sport and Exercise Psychology*, 38(2),
854 173-186. doi:10.1123/jsep.2015-0159
- 855 Howells, K., Sarkar, M., & Fletcher, D. (2017). Can athletes benefit from difficulty? A
856 systematic review of growth following adversity in competitive sport. In M. Wilson,
857 V. Walsh, & B. Parkin (Eds.), *Sport and the brain: The science of preparing,*
858 *enduring and winning* (Vol. 234, pp. 117-159). UK: Elsevier.
859 doi:10.1016/bs.pbr.2017.06.002
- 860 Howells, K., Wadey, R., Roy-Davis, K., & Evans, L. (2020). A systematic review of
861 interventions to promote growth following adversity. *Psychology of Sport and*
862 *Exercise*, 101671. doi:10.1016/j.psychsport.2020.101671

- 863 Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events:
864 Applications of the schema construct. *Social Cognition*, 7(2), 113-136.
865 doi:10.1521/soco.1989.7.2.113
- 866 Joseph, S., & Linley, P. A. (2005). Positive adjustment to threatening events: An organismic
867 valuing theory of growth through adversity. *Review of General Psychology*, 9(3), 262-
868 280. doi:10.1037/1089-2680.9.3.262
- 869 Joseph, S., & Linley, P. A. (2006). Growth following adversity: Theoretical perspectives and
870 implications for clinical practice. *Clinical Psychology Review*, 26(8), 1041-1053.
871 doi:10.1016/j.cpr.2005.12.006
- 872 Joseph, S., Murphy, D., & Regel, S. (2012). An affective–cognitive processing model of
873 post-traumatic growth. *Clinical Psychology & Psychotherapy*, 19(4), 316-325.
874 doi:10.1002/cpp.1798
- 875 Krefting, L. (1991). Rigor in qualitative research: The assessment of
876 trustworthiness. *American Journal of Occupational Therapy*, 45(3), 214-222.
877 doi:10.5014/ajot.45.3.214
- 878 Kunz, S., Joseph, S., Geyh, S., & Peter, C. (2018). Coping and posttraumatic growth: A
879 longitudinal comparison of two alternative views. *Rehabilitation Psychology*, 63(2),
880 240-249. doi:10.1037/rep0000205
- 881 Larkin, M., Watts, S., & Clifton, E. (2006). Giving voice and making sense in interpretative
882 phenomenological analysis. *Qualitative Research in Psychology*, 3(2), 102-120.
883 doi:10.1191/1478088706qp062oa
- 884 Leppma, M., Mnatsakanova, A., Sarkisian, K., Scott, O., Adjeroh, L., Andrew, M. E., ... &
885 McCanlies, E. C. (2018). Stressful life events and posttraumatic growth among police
886 officers: A cross-sectional study. *Stress and Health*, 34(1), 175-186.
887 doi:10.1002/smi.2772

- 888 Levitt, H. M., Bamberg, M., Creswell, J. W., Frost, D., Josselson, R., & Suárez-Orozco, C.
889 (2018). Journal article reporting standards for qualitative research in psychology: The
890 APA publications and communications board task force report. *American*
891 *Psychologist*, 73(1), 26-46. doi:10.1037/amp0000151
- 892 Levitt, H. M., Motulsky, S. L., Wertz, F. J., Morrow, S. L., & Ponterotto, J. G. (2017).
893 Recommendations for designing and reviewing qualitative research in psychology:
894 Promoting methodological integrity. *Qualitative Psychology*, 4(1), 2-22.
895 doi:10.1037/qup0000082
- 896 Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A
897 review. *Journal of Traumatic Stress*, 17(1), 11-21.
898 doi:10.1023/B:JOTS.0000014671.27856.7e
- 899 Maercker, A., & Zoellner, T. (2004). The Janus face of self-perceived growth: Toward a two-
900 component model of posttraumatic growth. *Psychological Inquiry*, 15(1), 41-48.
- 901 Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling
902 psychology. *Journal of Counseling Psychology*, 52(2), 250-260. doi:10.1037/0022-
903 0167.52.2.250
- 904 Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies
905 for establishing reliability and validity in qualitative research. *International Journal of*
906 *Qualitative Methods*, 1(2), 13-22.
- 907 Moshman, D. (2018). Metacognitive theories revisited. *Educational Psychology*
908 *Review*, 30(2), 599-606. doi:10.1007/s10648-017-9413-7
- 909 Neely, K. C., Dunn, J. G., McHugh, T-L. F., & Holt, N. L. (2018). Female athletes'
910 experiences of positive growth following deselection in sport. *Journal of Sport and*
911 *Exercise Psychology*, 40, 173-186. doi:10.1123/jsep.2017-0136

- 912 Neely, K. C., Tamminen, K. A., & Holt, N. L. (2020). Gender differences in athletes'
913 experiences of adversity and growth. In R. Wadey, M. Day, & K. Howells (Eds.),
914 *Growth following adversity in sport: A mechanism to positive change* (pp. 160-173).
915 Abingdon: Routledge.
- 916 Orille, A. C., Marton, V., & Taku, K. (2020). Posttraumatic growth impacts views of others'
917 trauma: The roles of shared experience and gender. *Journal of Humanistic*
918 *Psychology*, 00(0), 1-14. doi:10.1177/0022167820961928
- 919 Park, C. L., Cohen, L. H., & Murch, R. L. (1996). Assessment and prediction of stress-related
920 growth. *Journal of Personality*, 64(1), 71-105. doi:10.1111/j.1467-
921 6494.1996.tb00815.x
- 922 Ponterotto, J. G. (2006). Brief note on the origins, evolution, and meaning of the qualitative
923 research concept thick description. *The Qualitative Report*, 11(3), 538-549.
- 924 Roepke, A. M., Benson, L., Tsukayama, E., & Yaden, D. B. (2018). Prospective writing:
925 Randomized controlled trial of an intervention for facilitating growth after
926 adversity. *The Journal of Positive Psychology*, 13(6), 627-642.
927 doi:10.1080/17439760.2017.1365161
- 928 Rogers, C. R. (1967). *On becoming a person*. London: Constable.
- 929 Roy-Davis, K., Wadey, R., & Evans, L. (2017). A grounded theory of sport injury-related
930 growth. *Sport, Exercise, and Performance Psychology*, 6(1), 35-52.
931 doi:10.1037/spy0000080
- 932 Salim, J., & Wadey, R. (2018). Can emotional disclosure promote sport injury-related
933 growth? *Journal of Applied Sport Psychology*, 30(4), 367-387.
934 doi:10.1080/10413200.2017.1417338

- 935 Salim, J., & Wadey, R. (2019). Using gratitude to promote sport injury–related
936 growth. *Journal of Applied Sport Psychology, 0*, 1-20.
937 doi:10.1080/10413200.2019.1626515
- 938 Salim, J., Wadey, R., & Diss, C. (2016). Examining hardiness, coping and stress-related
939 growth following sport injury. *Journal of Applied Sport Psychology, 28*(2), 154-169.
940 doi:10.1080/10413200.2015.1086448
- 941 Sarkar, M., & Fletcher, D. (2014). Psychological resilience in sport performers: A review of
942 stressors and protective factors. *Journal of Sports Sciences, 32*(15), 1419-1434.
943 doi:10.1080/02640414.2014.901551
- 944 Sarkar, M., Fletcher, D., & Brown, D. J. (2015). What doesn't kill me...: Adversity-related
945 experiences are vital in the development of superior Olympic performance. *Journal of*
946 *Science and Medicine in Sport, 18*(4), 475-479. doi:10.1016/j.jsams.2014.06.010
- 947 Schinke, R. J., Stambulova, N. B., Si, G., & Moore, Z. (2018). International society of sport
948 psychology position stand: Athletes' mental health, performance, and
949 development. *International Journal of Sport and Exercise Psychology, 16*(6), 622-
950 639. doi:10.1080/1612197X.2017.1295557
- 951 Sheikh, A. I. (2008). Posttraumatic growth in trauma survivors: Implications for
952 practice. *Counselling Psychology Quarterly, 21*(1), 85-97.
953 doi:10.1080/09515070801896186
- 954 Sinclair, D.A., & Orlick, T. (1993). Positive transitions from high-performance sport. *The*
955 *Sport Psychologist, 7*, 138-150. doi:10.1123/tsp.7.2.138
- 956 Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems
957 and opportunities within sport and exercise psychology. *International Review of Sport*
958 *and Exercise Psychology, 11*(1), 101-121. doi:10.1080/1750984X.2017.1317357

- 959 Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological
960 analysis. *Health Psychology Review*, 5(1), 9-27. doi:10.1080/17437199.2010.510659
- 961 Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis:
962 Theory, method and research*. Thousand Oaks, CA: Sage.
- 963 Sparkes, A. C. (1998). Validity in qualitative inquiry and the problem of criteria: Implications
964 for sport psychology. *The Sport Psychologist*, 12(4), 363-386.
965 doi:10.1123/tsp.12.4.363
- 966 Stake, R. E. (1995). *The art of case study research*. London: Sage.
- 967 Stockton, H., Hunt, N., & Joseph, S. (2011). Cognitive processing, rumination, and
968 posttraumatic growth. *Journal of Traumatic Stress*, 24(1), 85-92.
969 doi:10.1002/jts.20606
- 970 Swann, C., Moran, A., & Piggott, D. (2015). Defining elite athletes: Issues in the study of
971 expert performance in sport psychology. *Psychology of Sport and Exercise*, 16(1), 3-
972 14. doi:10.1016/j.psychsport.2014.07.004
- 973 Tamminen, K. A., & Neely, K. C. (2016). Positive growth in sport. In N. L. Holt (Eds.),
974 *Positive youth development through sport* (2nd ed., pp. 193-204). London: Routledge.
- 975 Tamminen, K. A., Holt, N. L., & Neely, K. C. (2013). Exploring adversity and the potential
976 for growth among elite female athletes. *Psychology of Sport and Exercise*, 14(1), 28-
977 36. doi:10.1016/j.psychsport.2012.07.002
- 978 Taylor, S. E., & Armor, D. A. (1996). Positive illusions and coping with adversity. *Journal of
979 Personality*, 64(4), 873-898. doi:10.1111/j.1467-6494.1996.tb00947.x
- 980 Taylor, J., Ogilvie, B., & Lavalley, D. (2005). Career transition among athletes: Is there life
981 after sports? In J. M. Williams (Eds.), *Applied sport psychology: Personal growth to
982 peak performance* (5th ed., pp. 595-615). Columbus, OH: McGraw-Hill.

- 983 Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma and transformation: Growing in the*
984 *aftermath of suffering*. Thousand Oaks, CA: Sage.
- 985 Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and
986 empirical evidence. *Psychological Inquiry*, *15*(1), 1-18.
987 doi:10.1207/s15327965pli1501_01
- 988 Tedeschi, R. G., Shakespeare-Finch, J., Taku, K., & Calhoun, L. G. (2018). *Posttraumatic*
989 *growth: Theory, research, and applications*. New York: Routledge.
990 doi:10.4324/9781315527451
- 991 Thomas, D. R. (2017). Feedback from research participants: Are member checks useful in
992 qualitative research? *Qualitative Research in Psychology*, *14*(1), 23-41.
993 doi:10.1080/14780887.2016.1219435
- 994 Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative
995 research. *Qualitative Inquiry*, *16*(10), 837-851. doi:10.1177/1077800410383121
- 996 Triplett, K. N., Tedeschi, R. G., Cann, A., Calhoun, L. G., & Reeve, C. L. (2012).
997 Posttraumatic growth, meaning in life, and life satisfaction in response to
998 trauma. *Psychological Trauma: Theory, Research, Practice, and Policy*, *4*(4), 400.
999 doi:10.1037/a0024204
- 1000 Vaillant, G.E. (1995). *The wisdom of the ego*. US: Harvard University Press.
- 1001 Zoellner, T., & Maercker, A. (2006). Posttraumatic growth in clinical psychology - A critical
1002 review and introduction of a two-component model. *Clinical Psychology*
1003 *Review*, *26*(5), 626-653. doi:10.1016/j.cpr.2006.01.008
- 1004 Zoellner, T., Rabe, S., Karl, A., & Maercker, A. (2008). Posttraumatic growth in accident
1005 survivors: Openness and optimism as predictors of its constructive or illusory
1006 sides. *Journal of Clinical Psychology*, *64*(3), 245-263. doi:10.1002/jclp.20441