

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

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### 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

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

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

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

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

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

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

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

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

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

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

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

## Method

### Methodology

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

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

### **Participant Selection and Demographics**

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

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



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

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

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

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

Of the participants eligible for inclusion, the final interview sample consisted of six participants. This sample is consistent with Smith and colleagues' (2009) recommendation for between 4 and 10 participants for an IPA study and is consistent with other published IPA studies in the sport-related growth literature (e.g., Howells & Fletcher, 2016; Tamminen et al., 2013). Additionally, this is in line with the primary aim to provide a rich, detailed account of individual experience in order to understand the complexity of the phenomenon.

Recruitment efforts resulted in five females and one male participating in the study, aged between 25 and 46 years ( $M = 33.33$ ,  $SD = 8.43$ ). It is worth noting that despite the relative equality in gender of the wider prospective participants, the final sample consisted of predominantly females. Offering support to this gender split, Neely et al. (2020) commented on the greater frequency of reported growth experienced by females than males. Of the sample higher in reported growth, with an average score of 26.33 on the SRGS-R, two athletes competed in rowing and one in triathlon, aged between 25 and 46 years ( $M = 37$ ,  $SD = 8.83$ ). Furthermore, two of these were current female athletes with one retired male athlete and two athletes held a world class elite athlete classification while one held a competitive elite classification. Of the sample lower in reported growth, with an average score of -7.67 on

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

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

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

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

### **Data Collection**

The approach taken for data collection was consistent with the researcher's interpretivist epistemological position, focusing on understanding the meaning an individual gives to their experiences and maintaining knowledge is developed through a process of interpretation. Following institutional ethical approval, potential participants eligible for the study were recruited through the researcher's existing contacts and through private messaging on social media. Subsequently, snowball sampling recruited further athletes who fit the inclusion criteria. Prior to and on the day of the interview, participants were assured of their privacy, provided with an information sheet, the opportunity to discuss queries, and then gave informed consent to participate. The participants were given choice over the interview location taking place in person or via Skype. Participant choice in research is considered an important element when exploring sensitive topics, encouraging an equal relationship between the researcher and the participant (Hanna, 2012). Previous growth research has 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 guidance<sup>1</sup>. 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

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<sup>1</sup> Interview guide is available on request from the corresponding author.

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

### **Data Analysis**

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

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

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

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

### **Methodological Integrity**

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



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

## **Results and Discussion**

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

### **Understanding of Self**

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

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

### *Self-awareness*

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

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

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

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

### *Self-regulation*

In further exploration of understanding of self, distinct differences in the self-regulatory skills of athletes were shown to be associated with the level of reported growth. Providing an enhanced understanding to the current sport related growth literature, athletes higher in reported growth showed greater engagement and utilisation of adaptive coping strategies to manage thoughts, emotions, and behaviours (Howells & Fletcher, 2015). Participants reflected on their ability to choose an appropriate strategy to manage thoughts, emotions, and behaviour. Distinct differences in the level of self-regulation were interpreted between the individuals displaying higher and lower levels of growth, evidenced through their use of long-term coping strategies. For example, following the stressor of divorce, Gemma initially disregarded the impact of her marriage separation, commenting; "I put on a front because I did just mentally box it away. I didn't address the things that needed to be addressed." Despite this, the initial distance from the event gave Gemma time for reflection, enabled her to rationalise her feelings, and allowed her to engage in proactive techniques to cope with the separation:

I would say to anybody, actually rationalise these things and ask what is the worst that can happen and if that isn't being homeless or without things that are quite fundamental to your health, then why don't you just go for it? Then, if that didn't work I made another plan and got really excited about that plan B, it means that I get on with the rest of my life.

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

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

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

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

### **Development in Athletic Identity**

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

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

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



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

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

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

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

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

### **Social Support**

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

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

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

My coach both at University and home just seemed to forget about me, it was hard.

My University coach is still supportive, just sometimes I feel like I'm not worthy of his time because I'm injured which I guess is a bit frustrating when he doesn't quite get what I'm saying.

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

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

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

### **Strengths, Limitations, and Future Research**

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

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

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

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

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

### **Conclusion**

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



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