

Running head: [Taking an embodied approach]

Taking an embodied approach to Posttraumatic growth research and sport

Chapter XX

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Abstract

We are embodied creatures and by proxy, so is our research and the topics, subjects, experiences we study (Ellingson, 2017; Hefferon, 2013; 2018a). Trauma, and injury to the body, have been explored by psychologists as embodied experiences, particularly the role of the body in the recovery process and as part of the potential trajectory for psychological growth (Hefferon et al., 2009; 2010; 2012; Levine, 2010; Rothschild, 2000). This chapter will therefore aim to situate the area of posttraumatic growth, from an embodied perspective, and within a sporting context. The chapter will first review the concept of embodiment, moving on to focus on corporeal elements of posttraumatic growth and situate this within sporting populations who have experienced significant trauma and injury. Finally, the chapter will offer readers suggestions for engaging in more embodied posttraumatic growth research within sport and trauma populations.

Introduction

At some point or another, Philosophy, Psychology, and Sport, have been criticized for taking primarily cerebral approaches to research inquiry, ‘invaded by the body snatchers’, so to speak (Gallagher, 2016; Johnson, 2017, p. 11; Nesti, 2004). However, when aiming to understand the complex experiences of those that have undergone physical trauma, this cognitive mono-focus becomes an impossibility. Trauma is a bodily experience (Levine, 2010; 2008; Ogden, Minton & Pain, 2006), and our bodies are integral to how we perceive and understand the world around us (Allen-Collinson, 2017; Merleau-Ponty, 1963). Thus, the body and our relationship with our body (e.g., body-self; Sparkes & Smith, 2013), should play a central role in our research endeavours to understand the construct of growth following adversity. This is even more so pertinent when researching athletes who have experienced physical trauma (e.g. lost appendage), as the sporting body becomes the very centre of trauma, recovery and excellence.

As the area of growth following adversity has already been explored in depth within the previous chapters, we aim to offer an additional, more embodied perspective on the field and within the context of sport. This chapter stems from our predominately qualitative work with multiple clinical populations, aiming to explore, from their perspective, what it is like to experience trauma and subsequently grow following physically altering events. We are both posttraumatic growth (PTG) researchers, and have had the privilege of being let in to the lifeworld of many clinical populations, from cancer survivors to amputees, whose lives and *bodies* have been forever changed as the result of trauma. PTG has been defined as “positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances” (Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018, p. 3). These unexpected ‘seismic events’ are believed to “seriously challenge or shatter an individual’s assumptive world” (p. 4). Growth therefore has been recorded across cognitive, emotional and behavioural changes that are deemed transformative to the individual. As researchers, we ascribe to the position that PTG is both a process and an outcome (Tedeschi et al., 2018). We also note that there are differing definitions of the concept, as well as current debates within the field (e.g., see Jayawickreme & Blackie, 2014). However, our position is that PTG can be demonstrated within our populations by the transformational change discussed in their narratives, as well as transformative action-oriented growth noted via positive health behavioural changes (e.g., uptake of exercise/sport, increased self-care, enhanced body-self relationship) and elevated sporting positions (e.g., amateur to elite performer) which are arguably operating at a higher level of functioning than which existed before their trauma

occurred (Joseph & Linley, 2004). Although taking an action-focused approach to growth is not the only way to conceptualise PTG (Tedeschi et al., 2018), adopting this behavioural perspective can “add validity” to our understanding of the field itself (Shakespeare-Finch & Barrington, 2012, p. 433). We also support the continued investigation into the argument that different trauma types and contexts may influence PTG processes and outcomes (Chopko, Palmieri & Adams, 2018; Karanci, et al., 2012; Kılıç, Magruder & Koryürek, 2016; Kira, Aboumediene, Ashby, Odenat, Mohanesh & Alamia, 2013; Shakespeare-Finch & Armstrong, 2010; Shuwiekh, Kira & Ashby, 2018; Wu et al., 2019); and that following a direct physical trauma (e.g., illness, injury, amputation), the body becomes a focal point in both the process and outcomes of PTG. As such, we argue that researchers should be aiming to make the body a “meaningful presence” in the PTG and sport research field (Ellingson, 2017, p. 1).

Literature review

In order to situate an embodied approach to PTG research in sport, we first need to clarify what we mean by embodiment and of course, the body. The body “...is simultaneously physical and affective, social and individual, produced and producing, reproductive and innovative” (Jones & Woglom, 2015, p. 116 as cited in Ellingson, 2017). Bodies have the capacity to *tell stories* (Sparkes & Smith, 2013), and yet, despite this phenomenal capacity of the body, it remains “the one marvel of nature that we least stop to observe” (Aldersey-Williams, 2013, p. xviii). Embodiment is a vast area of research, spanning several competing perspectives, from biological to cultural practice (Ash & Gallagher, 2015), and even as far as a proposed separate area of psychology itself (e.g., Psychology of Physical Sensations; Eccleston, 2016). In the general psychological literature, embodiment has been defined as “an awareness of and responsiveness to bodily sensations” (Impett et al., 2006, p. 40) as well as the perspective that “thoughts, feelings and behaviours are grounded in sensory experiences and bodily states” (Meier, Schnall, Schwartz & Bargh, 2013, p. 2). Key to embodiment is body awareness, a person’s proprioceptive ability to recognise the body in space (e.g., motor skills, walking) and interoceptive ability to understand what is going on inside the body (e.g., increased heart rate, shallow breathing) capabilities. This inevitably links to identifying and understanding emotion feeling states (Eccleston, 2016).

Although there has been criticism of the lack of embodied research practices within the field of sport psychology (Nesti, 2004), embodiment and the body have been pursued within sports from multiple perspectives, including, but not limited to: understanding the role of the “Gaze”, physicality, body work, sporting embodiment (Allen-Collinson, 2009; Brace-Govan, 2002; McDermott, 1996; 2000; Shilling & Bunsell, 2014) existential and phenomenological

approaches (Allen-Collinson, 2009; 2017) and the “sensory revolution” (Sparkes, 2017, p. 343). The construct of embodiment has been less prominent in the field of wellbeing (for a review, see Hefferon, 2015). Presently, derived from a series of large scale, mixed methods analyses, Piran (2019) has offered the first ‘positive embodiment’ perspective, consisting of five dimensions of the experience of embodiment: *body connection and comfort* (i.e., feeling ‘at home’ in the body), *agency and functionality* (i.e., acting with agency through physical functionality), *experience and expression of desire* (i.e., connection to desire- appetite, sexual), *attuned self-care* (i.e., attuned to inner needs and states) and *inhabiting the body as a subjective site* (i.e., resisting objectification). Despite this emergence of more embodied perspectives on wellbeing constructs, the role of the body and embodiment in the process and as an outcome of positive transformation following adversity is fledgling.

Posttraumatic Growth: Taking an Embodied Perspective

Focusing on the role of the body within the PTG process emerged from Kate’s early PhD research with women who had participated in an exercise intervention during treatment for breast cancer. In the early 2000’s, the concept of PTG was gaining popularity in the academic field as well as the exploration of potential interventions that could be employed to foster the phenomenon (Tedeschi & Calhoun, 2004a). Quantitative studies were plentiful regarding the prevalence and variables associated with PTG (Tedeschi & Calhoun, 2004b). However, there was a dearth of research and focus on the role of the body and the use of physical activity within the process and outcomes of PTG (Hefferon, Grealley & Mutrie, 2008; Sabiston, McDonough & Crocker, 2007).

During initial in-depth interviews, Kate noticed that whilst the women reported the already established, traditional domains of PTG (i.e., personal strength, relating to others, new possibilities, appreciation of life, and spiritual and existential change; Tedeschi et al., 2018) novel, embodied facets of their experience came to the fore. Their body was very much a central feature of their PTG journey, not only during the process of recovery (e.g., physical changes, reconnecting to a new/altered body) but in transformative positive health practices (e.g., novel uptake of physical activity). At this point, these corporeal elements of the PTG process were not accounted for in the literature. To dig deeper, Kate conducted a larger, qualitative meta-synthesis of PTG within life-threatening physical illnesses, and found supportive evidence for additional *embodied* elements of the PTG processes and outcomes, offering a proposed sixth domain, a “new awareness of the body”², for those whose bodies have been

² e.g. heightened awareness and connection to the physical self; reclaiming of the body; taking responsibility for own health; improved health behaviours and reduced risky health behaviours (Hefferon et al., 2009, p. 372-373)

challenged/altered/threatened by physical illness. In 2015, Kampman, Hefferon, Wilson and Beale aimed to extend this embodied exploration of PTG beyond life threatening illness populations, to those who had experienced acquired disability. Their Meta-syntheses found similar findings within the acquired disability population, most prominent was the transformative experience of exploring new abilities via the loss of body functionality and increased body appreciation, arguing that “being severely injured has elements unique from other traumas due to its direct and substantial impact to the body” (p. 283).

From this exploratory work, previous inquiry within the field and continued studies since 2008, as well as being informed by historical philosophical writers such as Merleau-Ponty (2003), Frank (1995/2013) and Leder (1990), emerged a working theory of Corporeal Posttraumatic Growth (C-PTG; Hefferon 2012), which supports the argument that different trauma types and contexts may have different PTG processes and outcomes (Chopko, Palmieri & Adams, 2018; Karanci, et al., 2012; Kılıç, Magruder & Koryürek, 2016; Kira, Aboumediene, Ashby, Odenat, Mohanesh & Alamia, 2013; Shakespeare-Finch & Armstrong, 2010; Shuwiekh, Kira & Ashby, 2018; Wu et al., 2019). Hence, when a person experiences a *physical* trauma, whether by an internal (e.g., cancer) or external (e.g., car) transgressor, there may be potentially different, more embodied, PTG processes and set of outcomes that emerge from the experience (Hefferon, 2012; Hefferon, Grealy, Mutrie, 2009; 2010; Kampman et al., 2015; Kampman & Hefferon, 2019; Walsh, Morrison, Conway, Rogers, Sullivan & Groarke, 2018).

In terms of the process of this more embodied PTG perspective, to start, experiencing a physical trauma can lead to a heightened corporeal awareness of the body that may not have been present prior to the trauma (Hefferon, 2010; Hefferon 2012; Hefferon, 2009). Indeed, prior to illness or injury, individuals tend to live in what philosophers deem a ‘taken-for-granted body’ (Frank, 1995; Leder, 1990). In athletes, this can manifest as training through the pain, not taking time to recover and competing whilst ill (Schnell, Mayer, Diehl, Zipfel & Thiel, 2014). We ‘have’ a body that we exist in, one that we do not really appreciate or recognize- an “absent-presence” (Leder, 1990, p. 13); that is, until something traumatic happens. This taken-for-granted body is thus eliminated when individuals experience a heightened corporeal awareness and the body is situated first and foremost in our consciousness. The body is now a ‘vulnerable body’ or a ‘messy ill’ body that is ‘out of control’ (Ellison, 2017, p. 73); and “these bodily changes have meaning” (Sparkes & Smith, 2013, p. 131). By engaging and challenging our embodied experiences and selves, there is potential to grow and re-write our narrative in a multitude of positive ways (Brady, 2011 as cited in Ellingson, 2017).

Once an individual has experienced this heightened corporeal awareness, and depending on the trauma sustained, there may be a period of fear of the new body; this body that is now altered/wounded/weakened/threatening and a feeling of betrayal by the physical self (Hefferon, 2010). For some, there may be the overwhelming sense of a loss of control over the body (Gorven & Duplessis, 2018), or a feeling of “inhabiting a chaotic body” (Sparkes & Smith, 2013, p. 133). There may exist visible reminders of the trauma (e.g., lost appendage, scarring), placing the person into a highly mortality salient environment (Goldenberg et al., 2001), and so could perpetuate a daily renegotiation, both physically and psychologically, with this new physical self. Further, in some cases, participants have even stated that it was by enduring and overcoming the sheer physical pain of the trauma that helped to launch the process of PTG (Hefferon, et al., 2009) and on some level, reclaim their body (Salick & Auerbach, 2006). In the sport domain, our work with elite athletes with acquired disability has reported early frustration towards the body, after trauma, due to the loss of previous skills (Kampman & Hefferon, 2019). This frustration towards a person’s new form of physicality stems from missing what individuals have termed ‘the super body’, the automatic, effortless body; in essence, missing the taken-for-granted body.

From fearing the new body, individuals can find a way to reconnect with their new body, challenging and rebuilding a new relationship with their physical self, regaining a ‘sense of control’ and increased appreciation for the body (Gorven & Duplessis, 2018; Hefferon, 2010; Hefferon, 2012; Kampman et al., 2015; Sparkes & Smith, 2013). Individuals report engaging in various forms of self-care (Piran, 2016), such as attuning to the body’s needs; being ‘kinder’ to the body (e.g., rest, recovery); engaging in self-monitoring/examination (in the case of illness) and general renegotiation of the self/body relationship (Hefferon et al., 2009; Paterson et al., 1999). In our work, we have found that physical activity (Hefferon et al., 2008; Hefferon, 2012; Hefferon, Mallery, Gay & Elliot, 2012) and structured sport participation at both leisure and elite levels (Kampman & Hefferon, 2019; Kampman et al., in prep) can help facilitate this reconnection phase as these physical activities and environments can help: (a) provide a ‘normative’ activity to engage in, (b) challenge individual’s bodies in a safe environment, (c) gain awareness and acceptance around their bodies through sports, (d) offer social support and team environment, (e) offer a place to be surrounded by other bodies with varying abilities, (f) regain their physicality, (g) re-learn physical boundaries (e.g., use body as a monitoring tool), (h) connect physical self (body) as not a threat but an agent in recovery (e.g., activity), (i) focus on what the body can do versus what it cannot (i.e., functionality), and (j) offer a form of control back over the body in which they felt they lost control. Furthermore, for elite athletes with

acquired impairment, this reconnection of the body can consist of an awareness and acceptance with the lost abilities of the body and a need to “remake their bodies” (Howe & Silva, 2017, p.193). The memory of the old body may still cohabit the new body, providing a constant reminder of the fragility and vulnerability of the physical self and thus a source of appreciation for it (Kampman & Hefferon, 2019; Kampman et al., 2015).

Not only can the body be a focus in the PTG process in individuals who have experienced physical trauma, several enhanced physical outcomes have been documented and yet not adequately recognized by the PTG field. Increased appreciation and taking responsibility for one’s health via engaging in new health behavior changes (e.g., the adoption of improved nutritional plans or increased/novel uptake of an exercise/sport programme) provides a narrative of surpassing previous levels of physical functioning than which existed before the trauma occurred. As health behavior changes have been deemed more in line with benefit finding (Tedeschi et al., 2018), we would argue that these are not just perceived benefits, but “action-focused growth” (Jayawickreme & Blackie, 2014, p. 11), in that there are actual behavior changes deemed transformative by the participants themselves (Hobfoll et al, 2007; Shakespeare-Finch & Armstrong, 2012). For example, in athletes who had acquired a severe impairment that led to a disability, the cognitive element of growth exhibited as a deeper understanding of the body’s fragility, power, and also ability within disability (Kampman et al., 2015). This wisdom was displayed in their behavior (action) through taking breaks to recover from practice or not practicing when unwell and seeking medical attention more readily (Kampman, et al., in prep). Thus, in sports and within sporting bodies, this corporeal growth seemed to have implications for their careers as athletes, taking action to protect their bodies, to guarantee a longer, healthier career in sports. Similarly, in Hefferon et al. (2008), for those that had never engaged in physical activity before their cancer diagnosis, their new exercise engagement was deemed transformative as it provided them with a sense of empowerment (physical strength = mental strength), control and confidence, which they perceived to positively transfer over into other domains of their life.

Furthermore, Hanna’s current PhD work expands on these findings, focusing on the role of team sports within the PTG process. Her work has found preliminary evidence for the evolution of the body through team sport. In addition to the stages discussed above, the team sport environment can aid deliberate reflective and constructive rumination through sharing experiences with teammates (e.g., dealing with disablism, practical tips about the body). The data reveals a narrative revision around the body, moving from the body as ‘doing’ or ‘being in the background’ to being ‘world class’ and ‘functional’. Additionally, the body appears to be at

the centre of the schema change from 'I am the only one with an impairment' to 'diversity of bodies and abilities'. The 'impaired damaged body' becomes a 'strong, unique athletic body', with this new physical identity emerging via the participation in team sports.

In sum, previous and current fledgling research into the role of the body within the PTG process and outcomes, within traumas where the body has been affected by either an internal or external transgressor, is starting to show unique components that require further diverse methodological inquiry. At present, the majority of the work has been focused within illness related trauma (e.g., cancer) and from a qualitative perspective, thus further exploration across various trauma dynamics such as types (e.g., direct/indirect), contexts (e.g., single, repeated, chronic, cumulative), severity (e.g., objective, subjective ratings), causal attribution (e.g., preventable, predictable), as well as differing physical trauma types (e.g., burns), methodological approaches (e.g., mixed methods; time-span/developmental) and embodied reconnection facilitators (e.g., yoga, mindfulness) is needed to expand our understanding of the embodied experience of the posttraumatic growth journey. With a more body-based PTG scale already in use (i.e., Physical PTG scale; Walsh, Groarke, Morrison, Durkan, Rogers & Sullivan, 2018), the exploration of more embodied aspects of PTG is ripe for exploration.

Considerations for More Embodied Posttraumatic Growth Research within Trauma and Sport Populations

"Researchers begin with the body" (Ellingson, 2017, p. 1); the body is not just the site of trauma, but an integral part of how we research the topic area. Thus, the last section of this chapter will review the current methodological practices within the PTG research area and offer suggestions for how the field can take a more embodied approach to understanding the processes and outcomes of PTG in trauma populations. Furthermore, this section will offer researchers further relevant embodied topics to explore within the field of growth following adversity within sport.

Over the past five years, psychological research, including the area of positive psychology (one of many areas in which PTG arguably falls) has been criticised for utilizing restrictive, post-positivistic approaches and designs (e.g., cross-sectional surveys; Gonzalez, 2018), thereby limiting the understanding of the concepts we study. Researchers have called for more epistemological and methodological diversity, including more qualitative and pragmatic, mixed and multi-method designs (Hefferon et al., 2017; Rich, 2017). The use of diverse qualitative research approaches within sport and exercise has become well established (e.g., see Smith & Sparkes 2017), however, its use within PTG research is less so, although mounting.

Tedeschi et al. (2018) offered a full chapter in the contribution of qualitative research to understanding PTG, espousing its importance in providing voice, offering rich, new and differing perspectives as well as reaching beyond current positivist scales and hypotheses testing (Please also see Chapter 3, this Volume, regarding methodological considerations by Day, Howells & Wadey). Thus, the combination of embodied qualitative approaches within the sport and exercise field, the call for more embodied PTG research within sport and the ‘turn to qual’ in PTG inquiry is promising for ‘methodological creativity’ (Day & Wadey, 2016).

So how can we make the body substantive in our research? How do we talk or write about the body? All of qualitative research is inherently embodied (Ellingson, 2017) and this is especially poignant within the area of sport and trauma where the body is a focal point in the actual trauma and the subsequent recovery. Taking more phenomenological approaches, that recognise embodiment within the entire research process, is one clear way that we better understand the athlete and their athletic world “in the flesh of the lived sporting body” (Allen-Collinson, 2009, p. 280; Allen-Collinson, 2017; Nesti, 2004; Smith, 2017). Engaging in active, face-to-face interviewing is in itself a embodied practice (Ellison, 2017), however, researchers can move beyond this to engaging the participants whole body in the interview process such as engaging in object-interviews, where participants are asked to bring, touch, wear items of relevance (Fleetwood-Smith, Hefferon & Mair, 2019); asking participants to create lifeline sketches to understand the complicated nature of trauma and the role of the body within it (Kampman et al., in prep); setting up walking interviews (Ellison, 2017) or even interviewing or collecting data whilst athletes practice in their sport environment thus, engaging the participant in their sport and physicality whilst being asked about it (Kampman et al., in prep). PTG researchers are also encouraged to move beyond single time point interviewing (the most common qualitative approach in PTG research at present) to exploring further embodied and inclusive practices, such as photovoice and ethnographic inquiry. Finally, throughout the research journey, researchers should engage in reflexive practices (Gough, 2017), from a more embodied perspective. For example, how close are we to the research question? Have we, as researchers, experienced a trauma, either in the context of sport or not? Was this a physical trauma? What is my relationship like with my body now? What was it like then at the time of the trauma? What was my journey? Ultimately, reflexivity on who we are and our own experiences “should be explored *physically* as well as psychologically and emotionally” (Ellingson, 2017, p 5).

In addition to the extension of embodied research design approaches, sport researchers could explore more embodied topics relating to physical trauma, such as the role of the body in

mortality awareness and PTG. Increased existential awareness is a staple domain of the growth process, and in 2018, Tedeschi et al. adapted the renowned PTG inventory (PTGI) to expand the spiritual change subscale to include existential items (PTGI-X). This reflects a growing trend in the literature to explore the role of mortality awareness from both an anxiety provoking perspective (e.g., terror management theory) to a more positive, multi-dimensional approach (Ivtzan et al., 2015; McEwen, McDermott & Hefferon, 2018; Vail et al., 2012). As trauma to the body can lead to long lasting physical alterations and challenges (e.g., lost limbs, scarring; physiotherapy and rehabilitation), as well as create a mortality salient environment in which the individual cannot escape from, the role of the body in managing mortality awareness is an avenue to for future researchers (Cozzolino, Staples, Meyers & Samboceti, 2004).

Furthermore, the reported increase in body appreciation and focus on functionality that can arise following a physical trauma, is worthy of additional inquiry. The topic area aligns with the rapidly expanding *positive body image* (PBI) movement (Tylka & Piran, 2019), which is a multifaceted construct defined as: “An overarching love and respect for the body that allows individuals to: (a) appreciate the unique beauty of their body and the functions that it performs for them; (b) accept and even admire their body, including those aspects that are inconsistent with idealized images; (c) feel beautiful, comfortable, confident and happy with their body[...] (d) emphasize with their body’s assets rather than dwell on their imperfections; and (e) interpret incoming information in a body-protective manner whereby most positive information is internalised and most negative information is rejected or reframed (Tylka & Piran, 2019, pp. 2-3). PBI has been explored with regards to physical activity and sport participation, however, to date, the links between PTG, sport and positive body image have not been adequately explored.

Finally, adapted team sport is an environment of various traumas (Kampman, et al, in prep), full of bodies with different abilities, bodies that each carry a story of their own and, at times, a trauma that is evolving (e.g., chronic or degenerative conditions). Thus, athletes in these environments do not only live in their own mortality salient environments but are affected by other athlete’s traumas as well. This calls attention for further research into embodied aspects of vicarious posttraumatic growth among adapted sports (Day & Wadey, 2016; Kampman et al., in prep; please also see Chapter 4, this volume, by Martinelli & Day), as well as the recognition and exploration of negative, distressing and pressurised experiences/narratives within sport and the sporting environment, which can co-exist with accounts of growth and positive change (Caddick & Smith, 2014; Day & Wadey, 2016; Kampman et al., in prep; Sparkes & Smith, 2013).

Conclusion

This chapter aimed to offer the readers of this book an additional, embodied approach to understanding the process and outcomes of positive transformation following physical trauma, and within a sporting context. Researchers are encouraged to continue the exploration of the working theory of corporeal posttraumatic growth again within a wider range of trauma contexts and utilizing diverse methodological approaches. Within sporting populations, who have experienced significant trauma and injury, there is support for the importance of taking a holistic and embodied perspective when trying to understand the growth journey. Finally, embodied approaches to research design as well as more embodied topic areas can move our understanding of PTG further beyond the dominant, traditional mono-focus cognitive models of growth following adversity that exist today.

References

- Allen-Collinson, J. (2009). Sporting embodiment: Sports studies and the (continuing) promise of phenomenology. *Qualitative Research in Sport and Exercise*, 1(3), 279-296. doi: [10.1080/19398440903192340](https://doi.org/10.1080/19398440903192340)
- Allen-Collinson, J. (2017). Breathing in life: Phenomenological perspectives on sport and exercise. In B. Smith and A. C. Sparkes (Eds), *Routledge Handbook of Qualitative Research in Sport and Exercise* (pp. 11-23). Routledge: Oxon.
- Aldersey-Williams, H. (2013). *Anatomies: The human body, its parts and the stories they tell*. London, UK: Penguin Books Ltd.
- Ash, J., & Gallacher, L. A. (2015). Becoming attuned: Objects, affects and embodied methodology. In M. Perry & C.L Medina (Eds.), *Methodologies of embodiment: Inscribing bodies in qualitative research* (pp. 69-85). New York: Routledge.
- Brace-Govan, J. (2002). Looking at bodywork: Women and three physical activities. *Journal of Sport and Social Issues*, 26(4), 403-420. doi: [10.1177/0193732502238256](https://doi.org/10.1177/0193732502238256)
- Caddick, N. & Smith, B. (2014). The impact of sport and physical activity on the well-being of combat veterans: A systematic review. *Psychology of Sport and Exercise*, 15 (1), 9-18. Doi: [10.1016/j.psychsport.2013.09.011](https://doi.org/10.1016/j.psychsport.2013.09.011)
- Chopko, B. A., Palmieri, P. A., & Adams, R. E. (2018). Relationships among traumatic experiences, PTSD, and posttraumatic growth for police officers: A path analysis. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(2), 183-189. doi: 10.1037/tra0000261
- Cozzolino, P. J., Staples, A. D., Meyers, L. S., & Samboceti, J. (2004). Greed, death, and values: From terror management to transcendence management theory. *Personality and Social Psychology Bulletin*, 30(3), 278-292. doi: [10.1177/0146167203260716](https://doi.org/10.1177/0146167203260716)
- Day, M. C. & Wadey, R. (2016). Researching growth following adversity in sport and exercise: methodological implications and future recommendations. *Qualitative Research in Sport, Exercise and Health*, 9(4), 499-513. doi: [10.1080/2159676X.2017.1328460](https://doi.org/10.1080/2159676X.2017.1328460)
- Ellingson, L. L. (2017). *Embodiment in qualitative research*. Routledge: Oxon, UK.
- Eccleston, C. (2016). *Embodied: The psychology of physical sensation*. Oxford University Press: Oxford, UK.

- Gallagher, S. (2016). Phenomenology and embodied cognition. In L. Shapiro (Ed.), *The Routledge Handbook of Embodied Cognition* (pp. 9-18). Routledge: Oxford, UK.
- Fleetwood-Smith, R., Hefferon, K., & Mair, C. (2019). 'It's like... it's me': Exploring the lived experience of clothing attachment during wear. *International Journal of Fashion Studies*, 6(1), 41-62. doi: [10.1386/inf.6.1.41_1](https://doi.org/10.1386/inf.6.1.41_1)
- Goldenberg, J. L., Pyszczynski, T., Greenberg, J., Solomon, S., Kluck, B., & Cornwell, R. (2001). I am not an animal: Mortality salience, disgust, and the denial of human creatureliness. *Journal of Experimental Psychology: General*, 130(3), 427- 435. Doi: [10.1037/0096-3445.130.3.427](https://doi.org/10.1037/0096-3445.130.3.427)
- Gonzalez- Moralez, M. (2018). Advancing research methods in positive psychology. Keynote presented to Canadian Positive Psychology Association Scientific Conference, Toronto, Canada.
- Hefferon, K., Ashfield, A., Waters, L., & Synard, J. (2017). Understanding optimal human functioning—The 'call for qual' in exploring human flourishing and well-being. *The Journal of Positive Psychology*, 12, 3, 211-219. doi:[10.1080/17439760.2016.1225120](https://doi.org/10.1080/17439760.2016.1225120)
- Hefferon, K. (2012). Bringing back the body into positive psychology: The theory of Corporeal Posttraumatic growth in Breast Cancer. *Psychology*, 3, 12, 1238-1242. doi: [10.4236/psych.2012.312A183](https://doi.org/10.4236/psych.2012.312A183).
- Hefferon, K., Mallery, R., Gay, C., & Elliott, S. (2012): 'Leave all the troubles of the outside world': A qualitative study on the binary benefits of 'Boxercise' for individuals with mental health difficulties. *Qualitative Research in Sport, Exercise and Health*, 5(1), 80-102. [10.1080/2159676X.2012.712995](https://doi.org/10.1080/2159676X.2012.712995)
- Hefferon, K., Grealy, M., & Mutrie, N. (2010). Transforming from cocoon to butterfly: The potential role of the body in the process of posttraumatic growth. *Journal of Humanistic Psychology*, 50(2), 224–247. doi: [10.1177/0022167809341996](https://doi.org/10.1177/0022167809341996)
- Hefferon, K., Grealy, M., & Mutrie, N. (2009). Posttraumatic growth and life-threatening physical illness: A systematic review of the qualitative literature. *British Journal of Health Psychology*, 14(2), 343–378. doi:[10.1348/135910708X332936](https://doi.org/10.1348/135910708X332936)
- Hefferon, K., Grealy, M., & Mutrie, N. (2008). The perceived influence of an exercise class intervention on the process and outcomes of post-traumatic growth. *Journal of Mental Health and Physical Activity*, 1, 32–39. doi: [10.1016/j.mhpa.2008.06.003](https://doi.org/10.1016/j.mhpa.2008.06.003)
- Hobfoll, S. E., Hall, B. J., Canetti-Nisim, D., Galea, S., Johnson, R. J., & Palmieri, P. A. (2007). Refining our understanding of traumatic growth in the face of terrorism: Moving from meaning cognitions to doing what is meaningful. *Applied Psychology*, 56(3), 345-366. doi: 10.1111/j.1464-0597.2007.00292.x
- Howe, P., D., & Silva, C., F., (2017). Challenging 'normalcy': possibilities and pitfalls of Paralympic bodies. *South African Journal for Research in Sport, Physical Education and Recreation*, 39(1:2), 191-204.
- Impett, E. A., Daubenmier, J. J., & Hirschman, A. L. (2006). Minding the body: Yoga, embodiment, and well-being. *Sexuality Research & Social Policy*, 3(4), 39-48. doi: [10.1525/srsp.2006.3.4.39](https://doi.org/10.1525/srsp.2006.3.4.39)
- Jayawickreme, E., & Blackie, L. E. (2014). Post-traumatic growth as positive personality change: Evidence, controversies and future directions. *European Journal of Personality*, 28(4), 312-331. doi:10.1002/per.1963
- Johnson, M. (2017). *Embodied mind, meaning, and reason: How our bodies give rise to understanding*. Chicago: University of Chicago Press.
- Kampman, H., Hefferon, K., Wilson, M. and Beale, B. (2015). "I can do things now that people thought were impossible, actually, things that I thought were impossible": A meta-synthesis of the qualitative findings on posttraumatic growth and severe physical injury. *Canadian Psychology/Psychologie Canadienne*, 56(3), 283-294. doi: [10.1037/cap0000031](https://doi.org/10.1037/cap0000031)

- Kampman, H. & Hefferon, K. (Accepted manuscript). 'Find a sport and carry on': Posttraumatic growth and achievement in British Paralympic athletes. *International Journal of Wellbeing*.
- Kampman, H. (in prep). "Team sport as an organic thing – like a living, breathing thing that always accepts you" –The process of post-traumatic growth among athletes with physical impairments in team sports.
- Karanci, A. N., Işıklı, S., Aker, A. T., Gül, E. İ., Erkan, B. B., Özkol, H., et al. . (2012). Personality, posttraumatic stress and trauma type: Factors contributing to posttraumatic growth and its domains in a Turkish community sample. *European Journal of Psychotraumatology*, 3(1), 17303. doi: 10.3402/ejpt.v3i0.17303.
- Kılıç, C., Magruder, K. M., & Koryürek, M. M. (2016). Does trauma type relate to posttraumatic growth after war? A pilot study of young Iraqi war survivors living in Turkey. *Transcultural Psychiatry*, 53(1), 110-123. doi: [10.1177/1363461515612963](https://doi.org/10.1177/1363461515612963)
- Kira, I. A., Aboumediene, S., Ashby, J. S., Odenat, L., Mohanesh, J., & Alamia, H. (2013). The dynamics of posttraumatic growth across different trauma types in a Palestinian sample. *Journal of Loss and Trauma*, 18(2), 120-139. doi: [10.1080/15325024.2012.679129](https://doi.org/10.1080/15325024.2012.679129)
- Nesti, M. (2004). *Existential psychology and sport: Theory and application*. Abingdon, Oxon: Routledge.
- Levine, P. A. (2010). *In an unspoken voice: How the body releases trauma and restores goodness*. Berkeley, California: North Atlantic Books.
- Levine, P. A. (2008). *Healing trauma*. Sounds True, Inc. Boulder, Colorado.
- McEwan, O., McDermott, M. R., & Hefferon, K. (2018). Modelling everyday understandings of mortality: A qualitative enquiry. *Journal of Humanistic Psychology*, 1-26. doi: [10.1177/0022167818787908](https://doi.org/10.1177/0022167818787908)
- McDermott, L. (1996). Toward a feminist understanding of physicality within the context of women's physically active and sporting lives. *Sociology of Sport Journal*, 13(1), 12-30. doi: [10.1123/ssj.13.1.12](https://doi.org/10.1123/ssj.13.1.12)
- McDermott, L. (2000). A qualitative assessment of the significance of body perception to women's physical activity experiences: Revisiting discussions of physicalities. *Sociology of Sport Journal*, 17(4), 331-363.
- Meier, B. P., Schnall, S., Schwarz, N., & Bargh, J. A. (2012). Embodiment in social psychology. *Topics in Cognitive Science*, 4(4), 705-716. doi: 10.1111/j.1756-8765.2012.01212.x.
- Morris, B. A., & Shakespeare-Finch, J. (2011). Cancer diagnostic group differences in posttraumatic growth: Accounting for age, gender, trauma severity, and distress. *Journal of Loss and Trauma*, 16(3), 229-242. doi: [10.1080/15325024.2010.519292](https://doi.org/10.1080/15325024.2010.519292)
- Ogden, P., Minton, K., Pain, C., & van der Kolk, B. (2006). *Trauma and the body: A sensorimotor approach to psychotherapy*. NY, NY: W W Norton & Company.
- Perry, M. & Medina, C. (2015). *Methodologies of embodiment: Inscribing bodies in qualitative research*. New York: Routledge.
- Rich, G. J. (2017). The promise of qualitative inquiry for positive psychology: Diversifying methods. *The Journal of Positive Psychology*, 12(3), 220-231. doi: [10.1080/17439760.2016.1225119](https://doi.org/10.1080/17439760.2016.1225119)
- Sabiston, C. M., McDonough, M. H., & Crocker, P. R. (2007). Psychosocial experiences of breast cancer survivors involved in a dragon boat program: Exploring links to positive psychological growth. *Journal of Sport & Exercise Psychology*, 29(4), 419-438.
- Schnell, A., Mayer, J., Diehl, K., Zipfel, S. & Thiel, A., (2014). Giving everything for athletic success! - Sports-specific risk acceptance of elite adolescent athletes. *Psychology of*

- Sport and Exercise*, 15 (2), 165-172. doi: 10.1016/j.psychsport.2013.10.012 <https://doi.org/10.1016/j.psychsport.2013.10.012>
- Shakespeare-Finch, J., & Armstrong, D. (2010). Trauma type and posttrauma outcomes: Differences between survivors of motor vehicle accidents, sexual assault, and bereavement. *Journal of Loss and Trauma*, 15(2), 69-82. doi: [10.1080/15325020903373151](https://doi.org/10.1080/15325020903373151)
- Shakespeare-Finch, J. E. & Barrington, A. (2012). Behavioural changes add validity to the construct of posttraumatic growth. *Journal of Traumatic Stress*, 25(4), 433-439. doi: 10.1002/jts.21730.
- Shilling, C., & Bunsell, T. (2014). From iron maiden to superwoman: The stochastic art of self-transformation and the deviant female sporting body. *Qualitative Research in Sport, Exercise and Health*, 6(4), 478-498. doi: [10.1080/2159676X.2014.928897](https://doi.org/10.1080/2159676X.2014.928897)
- Shuwiekh, H., Kira, I. A., & Ashby, J. S. (2018). What are the personality and trauma dynamics that contribute to posttraumatic growth? *International Journal of Stress Management*, 25(2), 181-194. doi: [10.1037/str0000054](https://doi.org/10.1037/str0000054)
- Smith, J. (2017). Interpretative phenomenological analysis in sport and exercise: Getting at experience. In B. Smith and A.C. Sparkes (Eds.), *Routledge handbook of qualitative research in sport and exercise* (pp. 219-229). Routledge: Oxon.
- Smith, B. & Sparkes, A.C. (2017). *Routledge handbook of qualitative research in sport and exercise*. Routledge: Oxon.
- Sparkes, A.C. & Smith, B. (2013). Spinal cord injury, sport and the narrative possibilities of posttraumatic growth. In N. Warren and L. Manderson (Eds.), *Reframing disability and Quality of Life: A global perspective* (pp. 129-144). New York: Springer.
- Tedeschi, R. G., & Calhoun, L. G. (2004a). A clinical approach to posttraumatic growth. In S. Joseph and A. Linley (Eds), *Positive Psychology in Practice* (pp. 405-419). London, UK: John Wiley & Sons.
- Tedeschi, R. G., & Calhoun, L. G. (2004b). " Posttraumatic growth: Conceptual foundations and empirical evidence". *Psychological inquiry*, 15(1), 1-18. [10.1207/s15327965pli1501_01](https://doi.org/10.1207/s15327965pli1501_01)
- Tedeschi, R. G., Shakespeare-Finch, J., Taku, K., & Calhoun, L. G. (2018). *Posttraumatic growth: Theory, Research, and Applications*. NY, NY: Routledge.
- Tedeschi, R. G., Cann, A., Taku, K., Senol-Durak, E., & Calhoun, L. G. (2017). The posttraumatic growth inventory: A revision integrating existential and spiritual change. *Journal of Traumatic Stress*, 30(1), 11-18. doi: 10.1002/jts.22155
- Vail, III, K. E., Juhl, J., Arndt, J., Vess, M., Routledge, C., & Rutjens, B. T. (2012). When death is good for life: Considering the positive trajectories of terror management. *Personality and Social Psychology Review*, 16(4), 303-329. doi: 10.1177/1088868312440046
- Walsh, D. M., Morrison, T. G., Conway, R. J., Rogers, E., Sullivan, F. J., & Groarke, A. (2018). A model to predict psychological-and health-related adjustment in men with prostate Cancer: the role of post traumatic growth, physical post traumatic growth, resilience and mindfulness. *Frontiers in Psychology*, 9, 136. doi: 10.3389/fpsyg.2018.00136.
- Walsh, D. M., Groarke, A. M., Morrison, T. G., Durkan, G., Rogers, E., & Sullivan, F. J. (2018). Measuring a new facet of post traumatic growth: Development of a scale of physical post traumatic growth in men with prostate cancer. *PloS one*, 13(4), e0195992. doi: 10.1371/journal.pone.0195992
- Wu, X., Kaminga, A. C., Dai, W., Deng, J., Wang, Z., Pan, X., & Liu, A. (2019). The prevalence of moderate-to-high posttraumatic growth: A systematic review and meta-analysis. *Journal of Affective Disorders*, 243, 408-415. doi: 10.1016/j.jad.2018.09.023