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The contribution of sport in the rehabilitation process of disabled military veterans: A case study of the 2016 Invictus Games

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Abstract

A growing body of research highlights the positive impacts of sport and physical activity upon the physical and mental well-being of traumatically injured military personnel. This study, conducted at the 2016 Invictus Games in Orlando, Florida, sought to understand the role of sport in the rehabilitation process of military personnel who have undergone traumatic injury or have experienced chronic illness. Data were derived from in-depth focus groups, semi-structured interviews and open-ended questions with competitors, team managers and family members. Findings indicated that the use of sport and physical activity has been an effective rehabilitation tool for those who competed. Tactics such as goal setting and team mentality, often critical components of both sport and military training, are helpful in allowing these competitors to reconnect with their military identity, without the negative implications of self-comparison.

Keywords: Military, Traumatic injury, Sport-based Rehabilitation, Friends and Family, Relationships.

1. Introduction

Combat veterans who have experienced trauma and personal injury during conflict situations can experience emotional distress (Caddick, Smith, & Phoenix, 2015). After traumatic events, individuals often struggle with how to deal with the impact of the trauma (Tedeschi & Calhoun, 2004). Those experiencing a life altering, traumatic event must figure out how to deal with their new life situation – particularly, in the case of this paper, those experiencing injury or illness as a result of military combat. Self-identity (the way someone defines and validates their existence within the world they inhabit) can be affected after a traumatic event (Horowitz, 2015), as what links injured or ill service personnel to the rest of society is, post-traumatic injury, somewhat different to their pre-injury status. For example, pre-injury, part of their self-identity would be built around being highly physically fit and active individuals, which post-injury, by comparison, may well be highly curtailed. These differences are often measured in terms of societal norms and expectations of bodily function. However, as Mykitiuk and Karpin (2017) point out:

‘Normal’ is a contentious term. Descriptively, ‘normal’ represents ‘what is’ as a statistical average. However, the term also represents normative or prescriptive content about what is ‘right’ or ‘what should be’. Correspondingly, abnormality is a deviation from the norm. It is both a factual exception to the average and a value judgment about what is a ‘wrong’ state of being (p. 341).

Individuals seeking a “new normal” after a debilitating event, such as trauma (defined here as a severe shock or upsetting experience that may lead to physical and/or psychological damage), a debilitating illness or loss of a loved one, must adjust their lives to account for a range of changes including physical, emotional, social, and spiritual perspectives in an effort to establish what they come to perceive as a “normal” life (Sandsund, Pattison, Doyle, & Shaw, 2013). People in these

situations may struggle to find the right resources to help them get back to what they determine is a “normal” life.

The Invictus Games seek to aid in rehabilitating wounded veterans toward establishing a “normal” life. The Invictus Games are an international adaptive multi-sport event, created by Prince Harry in the United Kingdom (UK) following a visit to the Warrior Games in the USA, in which wounded, injured or ill military personnel and veterans compete in sporting competitions representing their home nations. One of the unique elements of the Invictus Games is that host cities and organising committees are obliged to provide accommodation and subsistence for two family members and/or friends of each competitor at the Games. The 2016 Invictus Games, upon which this research is based, were held May 6 – 12 at the ESPN Wide World of Sports Complex in Orlando, Florida. Four hundred and eight-seven competitors from fourteen nations (Afghanistan, Australia, Canada, Denmark, Estonia, France, Georgia, Germany, Italy, Jordan, Netherlands, New Zealand, United Kingdom and the United States) competed in ten sports (Archery, Indoor Rowing, Powerlifting, Road Cycling, Sitting Volleyball, Swimming, Track and Field, Wheelchair Basketball, Wheelchair Rugby, Wheelchair Tennis) and a driving competition. Competitors were selected to represent their respective nations through selection events held in the months prior to the Orlando event.

As Starling (2017) points out with regard to a number of Invictus Games competitors, “none of them were what they had once been. But they were what they were now: they were all adjusting to the new normal” (p.188). Accordingly, the purpose of this study is to understand the contribution of sport for competitors at the 2016 Invictus Games held in Orlando, Florida who were trying to establish their “new normal.” Thus, we sought to answer two questions:

RQ1: What does sport based competitive rehabilitation offer above and beyond conventional rehabilitation¹?

RQ2: What are the underlying mechanisms impacting the unique contribution of sport based competitive rehabilitation?

For the purpose of this paper, conventional rehabilitation is defined as one to one between the patient and a rehabilitation therapist involving repetitive strengthening and/or stretching exercises designed to regain/ retain all available functionality. According to the World Health Organisation (WHO) (2020) conventional rehabilitation is defined as highly person-centred (i.e. interventions and the approach are selected for each individual dependent upon their goals and preferences) with a set of interventions that may be provided in multiple different settings (i.e. inpatient or outpatient setting or an individual's home) designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment. The overall aim is to make the individual as independent as possible in everyday activities and enable their participation in all areas of life by addressing underlying conditions (such as pain) and improving the way an individual functions in order to support them to overcome difficulties with thinking, seeing, hearing, communicating, eating or moving around. As an example, according to Harvey et al. (2012) rehabilitative care for multiple-limb combat amputees is very similar to that used for all trauma patients, with the goal primarily being accomplished by "focusing on core and proximal muscle strengthening and neurological control, regardless of the level of amputation" (p.53). The authors claim that in order to maximize success, rehabilitation should begin as soon as possible, well prior to prosthetic fitting, and focus on critical core muscles, which should be conditioned in all planes, including rotary movement, to allow the patient to re-learn how to stabilize their body.

The design of the Invictus Games as a community of competitors, families, and friends, enabled the researchers to collect data from both competitors and their families and friends. This unique opportunity allowed us to access multiple perspectives of competitors, family members,

and friends to understand how the athlete achieved a new normal. Holly Goodberry, the Invictus Games Friends and Family Project Manager, claimed ‘friends and family are an integral part of a competitor’s journey’ and that the Legion ‘see them as the team behind the team and their support of an individual through that journey and beyond is very important’ (Royal British Legion, 2018). It was therefore, deemed just as important to gather their views as those of the competitors. To understand the process of establishing a new normal through sport, we first provide the theoretical lens for the paper – the normative framing of ableism, social identity, and post-traumatic growth. Next, we outline how scholars have examined the role of physical activity in rehabilitation, our methodology, our findings, and end with considerations for future research.

2 Literature Review

This literature review aims to highlight previous research that has investigated the impact of traumatic injury on military personnel, as well as work that has looked at the potential role of sport as a rehabilitation tool to provide an underpinning for what follows in the rest of the paper. In addition, it highlights the theories of Ableism, Social Identity, and Post-Traumatic Growth (PTG) to help us explain some of the themes that arose from the research.

2.1 Ableism

Ableism is the overarching theoretical basis for this paper. However, this will be underpinned by the theories of Social Identity and PTG. Ableism describes “prejudicial attitudes and discriminatory behaviours toward persons with a disability. Definitions of ableism hinge on one’s understanding of normal ability and the rights and benefits afforded to persons deemed “normal”” (Wolbring, 2012, p. 78). Ableism as it relates to disability is a system of beliefs and practices that produces a particular kind of self and body that is projected as the perfect, typical, and therefore, essentially human. Disability is used as a comparison to cast individuals as a diminished state of being human (Campbell, 2001). Campbell (2009) updated this conceptualization of ableism to

suggest that “ableism sets up a binary dynamic that is not simply comparative but rather co- relationally constitutive” (p. 6). That is, the ‘disabled’ body is necessary to reiterate the ‘real’ human. After a traumatic event, such as injury during military service, notions of ableism hinder initial attempts to cope with debilitating injury. In part, this is because ableism is closely associated with the notion of normalcy and the resultant power relationships that occur because of such normative values. According to Michalko and Titchkosky (2009) normalcy reflects conceptions of the legitimate way of being against which one’s abilities and characteristics are judged. As such, those who best fit this construed norm hold power over those who diverge from the norm. In the case of military personnel this would manifest itself in, for example, a previously physically fit and active soldier (perceived to be the epitome of physical ‘norms’), who suddenly loses a limb or limbs or whose injuries necessitate the use of a wheelchair. Their new deviation from expected bodily norms is perceived, from an ableist perspective, to make them less human and less valuable to society. For injured military personnel who were previously fit and active, this new deviation from the ‘norm’ can affect them harder given their previous active lifestyles.

Although normalcy can be invisible and rarely intrudes in the lives of people who meet the established criteria of ‘normal’, those who are perceived to deviate from that ‘norm’ often find that the concept of normalcy exists at the forefront of the reality of their everyday lives and is prevalent in their perceptions of lived experiences within the social order (Mahtani, 2001; Michalko & Titchkosky, 2009). Ableism devalues people with disabilities and results in segregation, social isolation, and social policies that limit opportunities for full societal participation. Ableism helps to explain the negative social stigma placed upon people or groups of people deviating from the ‘norm’.

2.2 Impact of Traumatic Injury on Military Personnel

Through mechanisms such as ableism, whereby non-disabled individuals are promoted as attractive and the 'norm' to which everyone should aspire (Barnes & Mercer, 2010), individuals who have recently acquired a disability are often forced to question their ability to perform tasks done previously and may view themselves as less competent since acquiring their disability (Lundberg, Bennett, & Smith, 2011). According to Murray (2015), this often means that when military personnel are faced with traumatic injury, their ideas of bodily perfection are challenged by their own embodiment. This heady mixture of having been socialised into accepting the idea of bodily perfection being a requisite of being in the military and their propensity to evaluate their own abilities through comparison not only with other people's abilities, but also the memories of what they used to be able to do themselves prior to injury or illness can have a devastating impact upon an individual's self-identity and sense of self-worth.

Cooper et al. (2018) suggest that the "rules" are different in military environments compared to civilian ones and that service personnel must navigate a complex cultural transition when moving between these two environments. Using the example of the civilian healthcare system, Christensen et al. (2018) highlighted a major impact of this inculcation into the military world upon those that had been forced to leave the military:

The participants preferred commands to choices because choices were experienced as unprofessional. The participants had more confidence in military personnel that gave unwavering commands and were often confused when healthcare professionals attempted to involve the participants in shared decision-making (p. 5).

Starling (2017) describes how the sudden transition from injury to medical discharge can produce confusion and feelings of loss of identity. He described how the training of military personnel is framed around structure and being told that you are better than civilians. However, their injury and associated loss of perceived invincibility and structure for their lives can have a profound

negative impact in terms of identity. As Emmons (2005) points out “to not have a place and a role that has become your way of life can have a devastating effect on your identity, sense of belonging and purpose in life” (p. 731). They are losing a level of structure in their lives that has been key to their identity at a time when they perceive their lives to be falling apart. Their physical abilities no longer meet the requirements necessary to be part of the organisation that makes up their dominant identity, whilst having to transition to a world that they consider alien and which operates, to a large extent, upon the same ableist norms as the military, but without the support structures and daily routine of the military to which they have become so accustomed.

2.3 Social Identity Theory (SIT)

Tajfel and Turner (1986) claim that individuals draw upon a certain identity depending upon the environment or situation in which they find themselves. An individual’s ‘social identity’ relates to the aspects of an individual that are defined by their membership of a particular group. The research participants’ membership as part of one of the armed services may form their dominant social identity, with Tajfel and Turner claiming that such groups have a strong influence over how an individual sees themselves. According to Griffith (2009) this self-conception is highly dependent upon the meaning an individual attaches to a particular group membership and the value and emotional importance they place on membership. According to Van Maanen (1978) the military adopt a divestiture process with new recruits, designed to supplant the incoming identity with a new organisationally situated identity, commonly known as a military mentality. The concept of ‘military mentality’ is claimed by Herbert (1998, p. 9) to draw upon aspects of depersonalisation and “deindividuation”, where stripping of previous self-definition takes place upon joining service. The new identity is something much deeper than just military culture and more about the spirit of the military becoming an all-encompassing way of life. This has

important ramifications for the way military personnel may react to injury and chronic illness, as well as their return to civilian life, which is discussed in the findings section.

2.4 Post-Traumatic Growth (PTG)

Post-Traumatic growth (PTG) can be understood as positive psychological change experienced as a result of the struggle with highly challenging life circumstances in that a traumatic event may provide an individual with significant challenges in attempting to adapt to their new situation (Tedeschi & Calhoun, 2004). This, in turn, may cause the individual to question their understanding of the world around them and their place within it. This is especially the case following a significant traumatic injury or illness that impacts both their social identity and their ability to self-determine their own role within that world. Smedema and Ebener (2010, p. 1311) state that “when an individual experiences a disabling injury or illness, he or she will invariably go through a process of adjusting to the resulting functional limitations”.

It should be made clear that PTG does not involve an individual undergoing a transformation that would allow them to return to the way their life was prior to the traumatic event. Rather PTG refers to a process whereby individuals undergo a significant improvement upon their outlook on life (Tedeschi & Calhoun, 2004). The goal of adaptation is to accomplish a state of adjustment (Smedema & Ebener, 2010). When an individual reaches this point, they no longer concentrate on their physical loss and their change in physical ability, but instead develop an appreciation of their existing ability (i.e., a new ‘normal’). Bishop (2005) explains that this relates to the ways in which an individual responds to functional, psychological, and social changes that take place as a consequence of adult-onset disability or chronic illness. In what follows, we consider how sport can be a rehabilitative tool aiding in PTG.

2.5 Sport as a Rehabilitative Tool

The use of sport as a rehabilitative tool for injured military personnel is not a new phenomenon having been the foundation for the Stoke Mandeville Games in the UK, which went on to become the Paralympic Games. However, it is something that appears to have taken on renewed importance over the last decade and a half (Brittain & Green, 2012). A growing body of research highlights the positive impacts of sport and physical activity upon the physical and mental well-being of traumatically injured or chronically ill military personnel (e.g., Caddick & Smith, 2014; Carless et al, 2013). However, it should be noted that one article highlights that this is not always the case for those who rehabilitate through sport and physical activity (Douglas & Carless, 2015).

In terms of the psychological and emotional impact of injury, researchers have mainly focused upon military personnel with either traumatic brain injury or PTSD. Even in these cases the authors have tended to focus upon one pathological (negative) issue e.g., alcohol misuse (Grossbard et al., 2017), interpersonal violence (Calhoun et al., 2017), mental health disorders (Stevellink et al., 2015) and risk of suicide (Barnes et al., 2012). Where impact upon relationships has been mentioned, researchers tend to either concentrate upon the impact on the children in the family (Holmes et al., 2013) or highlight the fact that the injury has led to marital problems (Cozza et al., 2010) without elucidating on how or why. Two articles do describe this impact in more depth. Bocarro and Sable (2003) investigated the impact of a community-based therapeutic recreation programme on the family life stories of twelve non-military individuals who had sustained severe spinal cord injuries (SCI). They highlighted the change in the relationship dynamic caused by the SCI and the impact of the injury upon their relationship with their children but made no attempt to explain this in terms of the underlying issues that caused these problems. Carless et al. (2013) investigated an inclusive adapted sport and adventure-training course for military personnel. They found that the participants' stories indicated a strengthening or repair of family relationships through involvement in the course but gave no indication of what

caused the relationship issues in the first place. We seek to fill the gap in the literature by examining what sport offers beyond conventional rehabilitation, and the underlying processes involved with establishing a new 'normal' through sport based competitive rehabilitation.

3. Methods

3.1 Seeking a better understanding of the rehabilitation process from the perspective of the participants.

This qualitative study was part of a larger project which sought to better understand the role of sport and specifically the Invictus Games in the rehabilitation process of military personnel, above and beyond conventional rehabilitation, who have undergone traumatic injury or chronic illness. We used a variety of qualitative methods as they have been used in greater frequency in the field of adapted physical activity primarily because it allows individuals with disabilities the opportunity to describe their experiences and opinions in greater depth (Zitomer & Goodwin, 2014).

In this instance, the intention was not just to understand the rehabilitative process from the perspective of the participants, but also from the perspectives of their friends and family, who have lived through this experience with them. Data collection methods applied in this article include questionnaires (Q) distributed to the competitors and their family and friends, as well as semi-structured focus group interviews (FG) with competitors and one-to-one interviews with team managers. Data were collected by a team of eight researchers: two senior academics, four doctoral students and two university research assistants. Data collection took place throughout the period of the event. All interviews were carried out by the two senior academics at times suitable to the interviewees. Questionnaires, which were only available in English, were distributed by the researchers, one of whom spoke Dutch and another French. All researchers spoke English and all teams had English-speaking volunteers or staff members who assisted

those individuals whose English was not sufficient to complete the questionnaire themselves. All research was performed with ethical clearance from the lead author's institution and the approval of the Invictus Games Foundation.

All questionnaire and interview data were collected during the Games in Orlando. Investigators were given unlimited access to all areas of the Games, including the athletes' dining hall and the questionnaires were distributed and recollected at a later time at the venues, with the only proviso that athletes were not to be approached during their own competitions. Interviews with team managers were arranged through the Invictus Games Foundation staff and focus groups were then arranged with athletes via the Team Managers. Questionnaires were distributed by the data collection team and the completed form was collected again later. All data collectors were given Invictus Games Foundation tee shirts and jackets and had Games ID cards bearing their photographs so they could be identified. One data collector tended to stay in a particular spot (e.g., the athletes dining hall) so they could approach people as they entered and collect completed forms when ready.

For the purpose of this article ableism, social identity theory and post-traumatic growth served as the grounding frameworks, using a thematic analysis approach (Braun & Clarke 2006). Ableism was used to highlight and explain the extremely negative impact of traumatic injury or chronic illness upon the participants, particularly in terms of changes in their perceived social identity, and post-traumatic growth was used as a framework to try and explain the perceived positive impacts of preparation for and participation in the Invictus Games as sport-based rehabilitation from the perspective of both the participants and their friends and family.

3.2 Participants

In total 153 competitors (23 female, 130 male) and 268 family and friends (182 female, 86 male) questionnaires were returned. Competitor respondents came from 13 of the 14 countries with

teams at the Games and represented a 31.4 percent response rate. The percentage of women respondents (15%) is roughly in line with figures reported by Dever (2019) for the US military (20 percent of the Air Force, 19 percent of the Navy, 15 percent of the Army and almost 9 percent of the Marine Corps), although this varies from country to country. The average length of time since the onset of injury for all respondents was just under eight years. The breakdown of military services that they came from was Army (104), Airforce (18), Navy (17), Marines (10) with three not answering this question and one Canadian male claiming to have served in both the Army and the Airforce. The family and friends' respondents came from ten of the fourteen competing nations with 188 of them classified as immediate family members of a competitor (e.g., partner, parent, sibling, child), 51 were friends of a competitor, 20 came from the wider family (e.g., aunt/ uncle, In-law etc.), and 11 failed to state what their connection to a competitor was. Group interviews were held with team members from three of the nations (Great Britain, Germany, and New Zealand) totaling sixteen competitors. For the German team, one of their team assistants acted as interpreter and consequently quotes are in the third person. Ten of the fourteen team managers, who acted as Chef de Mission for their teams and were involved in the selection process for their own team were interviewed. All the team managers were either serving or former military personnel or were senior members of staff working in military rehabilitation centres within their countries.

3.3 Research Tools

The questionnaires were a combination of closed and open-ended questions that were devised by the authors in advance of the Games. They were checked by staff at the Invictus Games Foundation (IGF) and the competitors' questionnaire was piloted by the IGF on six British participants from the 2014 Invictus Games. Based upon their feedback regarding ease of understanding and length, the original questionnaire was revised and given the final clearance by

the IGF staff. Friend and Family questions consisted of seventeen questions regarding their perceptions of their friend/family members' participation in sport and its impact upon their relationship. For example, "Can you describe whether your friend's/ loved one's involvement in sport has any impact upon their relationships with you and/ or others?" Competitor questions consisted of demographic information; participation in the London, 2014 Invictus Games (for those that did); the impact of preparing for and the reasons for wishing to participate in Orlando, 2016; and the impact of their injury or illness upon their lives and relationships). Examples of the questions asked included:

- How has preparing for/ taking part in the Invictus Games helped you in your recovery process?
- Did your injury/ illness impact upon your relationship with friends and family (if so in what ways) and has your involvement in sport and the Invictus Games also impacted upon these relationships (again – if so in what ways?)
- In your opinion what is the difference between conventional rehabilitation and rehabilitation through competitive sport?"

Team Manager Interviews consisted of eight questions examining their perception of participants' involvement in sport. Examples of the types of questions asked included: "In your opinion, has preparation for and/ or taking part in the Invictus Games helped competitors from your team in the recovery process? If yes, how?" and "Do you think sport is an important aspect of the recovery process? If so how?" A copy of the final questions can be provided upon request. No data that might make the individual identifiable was collected as a part of the questionnaire.

A semi-structured interview guide (Patton, 2002) was developed, based around the issues raised in the questionnaires. This allowed the interviewers (the two senior academics) to gain a more in-depth perspective from the respondents. All interviewees provided written informed

consent to their participation and all quotations are completely anonymized using only their country of origin and whether they were a competitor or a friend and family member. All interviews were digitally recorded and professionally transcribed with interviews being carried out in a quiet, but comfortable room provided by the Games organisers for this purpose.

3.4 Data Analysis

Analysis was conducted through a constant comparative method (Marshall & Rossman, 2011), consisting of both open coding and axial coding. All data across sources were combined as the purpose of the analysis was to understand the experience of the Invictus Games athlete and the congruency of their lived experience with the experiences and perceptions of family and friends and team managers. We believe this approach provides a clear understanding for the athlete experience by creating one full picture of the athlete from three perspectives.

Open coding served as the first phase in which following transcription of the interviews and open-ended questionnaire responses, transcripts from interviews and open-ended responses from the questionnaires were uploaded into QSR NVivo 10 to find keywords. The second author uploaded the responses into NVivo to better understand what words were being used by respondents in their description of their experiences. The second author utilized keyword weighted percentages and highlighted in yellow his interpretation of the most important keywords in order to remove words that were not helpful. For example, some unimportant words were used frequently in responses, such as “like”, “just”, “well”, and etcetera. The second author supplied a list of the keywords to the other authors. Interpretation of the keyword weighted percentages revealed high reliance on support, competence, growing, (new) life, sport, commitment, and developing.

With these keywords in consideration, we then conducted a thematic analysis following Braun and Clarke’s (2006) direction. The thematic analysis was conducted through the theoretical

lenses of ableism, social identity, and PTG. First, the lead author went through the data seeking, “repeated patterns of meaning” (Braun & Clarke, 2006, p. 86). From this process, the first author derived initial themes. This process was repeated to refine the themes before interview transcripts were provided to the second and third authors. The second and third authors then went through the transcripts searching for themes and evaluating how these initial themes, categories and codes fit (or not) with the different data from the interviews. For example, if there was a particular category derived from one of the interviews, we explored how and if these themes aligned with the data. After each author had conducted independent thematic analysis, they met in person to identify recurring themes, which constitute the major findings described below. While meeting, disagreements were rare because of the theoretical lens guidance in our interpretation of the data. There were no unresolved disputes once the in-person meeting was finished. This was completed to create inter-coder agreement to ensure our themes were reliable (Ryan & Bernard, 2003).

4. Results and Discussion

The findings are broken into two main sections. First, we provide the competitors’ views of sport based competitive rehabilitation to respond to RQ1. Second, we breakdown the areas in which competitors felt sport offered them an opportunity to re-establish what they felt to be a “new normal.” In response to RQ2, the research participants pointed to physical competence, psychological improvements (subthemes: 1. sport providing a purpose 2. sport as a release for aggression), and a renewed sense of camaraderie and social relatedness.

4.1 ‘Competitive rehabilitation’ as supplement to conventional rehabilitation

According to Brittain (2012), Sir Ludwig Guttmann, founder of the Stoke Mandeville Games, claimed that the big advantage of sport for people with disabilities lies within its recreational value in that it restores “that passion for playful activity and the desire to experience joy and pleasure in life, so deeply inherent in any human being” (p.527). In an attempt to find out why

sport appears to be successful as part of the rehabilitation process, competitors were asked to give their perceptions of the difference(s) between the impact of sport as a rehabilitation tool compared to conventional medically based one to one rehabilitation. It is important to state that some of the competitors highlighted that conventional rehabilitation had an important role to play as individuals need to do the foundational groundwork in order to achieve a level of health and fitness necessary to take part in sport-based competitive rehabilitation. As one competitor pointed out ‘you can’t just go racing straight away!’ (F, NZL, Q). It was pointed out that ‘both are as important’ (M, AUS, Q) as each other, that ‘they partner together well’ (M, AUS, Q) and are ‘complementary to each other. They combine to something better’ (M, NZL, Q).

However, there was a clear preference amongst the competitors for sport, or competitive rehabilitation as some called it, that is perhaps best summed up in the following quotes: ‘You feel lonely doing rehab, repetitive like a factory worker’ (M, GER, Q); Conventional rehab is repetitive, monitored, boring. Sport is exciting, multi leveled, motivating’ (F, USA, Q); ‘The focus (in sport) is not on pain and wounds, but on capacities and success’ (M, CAN, Q); ‘Conventional is a way to help to you get by. Sports demands that you improve and excel’ (M, USA, Q). Participation in competitive rehabilitation provided them with a greater opportunity to better understand their bodies and capabilities. A UK competitor (FG) claimed this was because ‘it raises focus and a will to achieve and believe once again. Sport provides immediate short and long-term feedback and they can see the progression’. Brittain and Green (2012) claim that:

‘as long as enjoyment is derived from the activity, then sport can help develop an active mind, self-confidence, self-dignity, self-discipline, spirit and camaraderie, all of which are essential in helping to overcome the all-consuming depression that can occur with sudden traumatic disability’ (p. 246).

Competitors' appreciation of the role of the Invictus games and sport-based training in their recovery process was perhaps best summed up by a male Italian competitor (Q) who stated 'first I saw sport only as a pastime and fun. Now I realise the importance of it to get well and make me feel alive.' Competitors felt that sport and training for the Invictus Games added to the rehabilitation process because it 'embraces and targets all three of the physical, social and psychological impacts of injury in a fun and engaging way' (M, UK, Q), because 'it is easier to rehab when you're doing something you enjoy' (M, UK, Q). Sport also makes the competitors feel 'connected with others' (M, DEN, Q) and provides a 'sense of belonging' (F, CAN, Q). A male Australian competitor (Q) stated that 'sport makes you part of a team. With conventional rehabilitation it's just you versus yourself with a therapist/ physio to push you' whereas 'sport takes away the emphasis on the injury and just brings the sport to the forefront' (F, UK, Q) and is 'less clinical and demoralizing' (M, UK, Q).

Competitors' comments indicate the connection to others and sense of belonging stemming from their military identities and a renewed sense of (military) camaraderie and social relatedness that is discussed later in this article. This was made clear when a male Australian competitor (Q) stated competitive rehabilitation is a 'good military way to do it', drawing parallels between their former military training and the competitive rehabilitation techniques that allowed him to reconnect partially with the military identity that had been lost. In what follows, we highlight specific themes that emerged from participants, family members, and managers on sports contribution to establishing a new 'normal'.

4.2 Underlying Mechanisms of Sports' Contributions to a New 'Normal'.

4.2.1 Physical Competence

Overwhelmingly, team managers stated that taking part in sport provided competitors with improved strength and function, improving their ability to live in a non-disabled environment,

which is consistent with previous research (e.g., White et al., 2004). As one team manager from a European country stated, training for, and participating in, the Invictus Games, “gives the athlete a new concept of their body. You (sic) know what you can do again.”

This idea is further highlighted by a female Barbadian F&F respondent (Q) who stated that, for their friend, taking part in sport had increased their ‘mental fitness, emotional and physical well-being ...phenomenally’. One of the most visible signs of this for some of the competitors was a loss of weight that had been gained through the inactivity that had occurred following their injury or illness. This loss of weight, in itself, had a positive impact upon both their physical and mental well-being. A female Canadian competitor (Q) stated ‘I lost over 35lbs that I had gained since my injury. I am feeling the best since a very long time’ and a male UK competitor (Q) who claimed that involvement in sport had reduced their weight ‘September - 19st 12lbs, May 17st 5 lbs – with all the associated benefits e.g. increased fitness and confidence.’ Given that military personnel pride themselves on physical fitness, including a healthy weight, it is not surprising that a loss of the weight gained post-injury has a positive impact on their self-identity. In terms of ableism, being overweight carries with it some of the same kinds of negative narratives associated with disability (Backstrom, 2012).

The most fundamental thing the competitors claimed to have learned was a better understanding of their physical competence and in doing so they begin to learn to listen to their bodies and accept some of their limitations. This was best summed up by a male competitor from New Zealand (FG) who stated:

I’ve been feeling adaptable working around the messages that my body is sending to me. There are times when I know I can still push myself and go and train and do that. There are times when my body tells me you’re doing too much. You’ve got to stop. You’ve got to rest. And I had to learn to accept that that wasn’t a failure on my part. It was a step that

I had to adjust my training to allow for the changes that were happening to me. But I am now listening and responding to what my body is asking of me and I know when it's time for me to just back off and take a couple of days off and let my body recover from what it's going through. (New Zealand Competitor, FG)

Sport offered an opportunity to improve the athletes' physical competence through improving physical ability post-injury. Additionally, some of the participants admitted to using alcohol to self-medicate, which in turn had impacted their physical competence. One male UK competitor (FG) stated that sport 'helped getting my life back on the rails. I used to drink too much', whilst a male Australian competitor (Q) claimed that participation in sport had led to 'motivation, getting fit and slowed down my alcohol intake.'

Ames and Cunradi (2005, p. 252) claim that 'heavy alcohol use is a significant problem in the military. Personnel often use alcohol to cope with stress, boredom, loneliness, and the lack of other recreational activities.' For at least some of the competitors, alcohol became a coping mechanism for the issues that arose as a result of sudden acquired injury or illness. For those who mentioned this issue, participation in sport had decreased the need to use alcohol in this way. Through training for the Invictus Games, participants now used sport as a form of self-medication. This follows Warner's (2019) findings that sport can serve as medicine if there is a team structure, a place to be accountable, and nobody is left out. In our case, the structure of the training and camaraderie led to reduced self-medication by drugs and alcohol and an increase in physical competence via this sport as medicine concept.

4.2.2 Psychological Improvement

During the process of sport participation impacting their physical abilities research participants noted that the psychology of the athlete also improved. This is a key area of impact, particularly given the high number of individuals with complex and common psychological conditions

(PTSD, depression, anxiety, emotional outbursts, body image) returning from combat or undergoing traumatic injury or chronic illness (Warden et al., 2005). According to many of the Team Managers, when participants first take part in rehabilitative sport, they tend to be very reserved, but they develop confidence, as well as improved body image as time goes on. One team manager attributed this to two factors, “(First) Training for the Invictus Games allows for entrance into a group of like-minded people with similar problems. (And) they use psychologists, but nothing is written down or disclosed so they begin to accept psychologists.” These interactions led some Team Managers to conclude that sport provides psychological healing.

Two subthemes became clear from the research participants regarding exactly how rehabilitation through sport might assist in positive psychological changes amongst the competitors. The first theme relates to sport providing a purpose for participants. One of the major coping mechanisms used by the competitors was that they simply withdrew from life and took on the life of a recluse. One UK male athlete stated that training for the Invictus Games helped him develop a purpose through, “Self-management, discipline and focus.” Another female competitor from Denmark stated that sport-based rehabilitation “brought a different kind of purpose in life besides my family.” Similarly, a male competitor from Australia added, “Competing in the games has increased my drive and motivation.”

From the perspective of family and friends, this was highlighted in quotes from an Australian F&F respondent (Q); ‘He went into a world of isolation and didn't talk to anyone’, and a UK F&F respondent (Q); ‘he distanced himself from family. No contact for about three years, although very close before’. A UK F&F respondent (Q) whose female family member withdrew into herself following her injury linked this response to a ‘loss of self-confidence and pride’. Christensen *et al.* (2018) claim that military personnel that get injured or become chronically ill whilst in service must undergo two major identity transformations, which may impact their social

identity and sense of self. The first is from a non-disabled individual to a person with a disability and the second is from a military to a civilian identity.

For family and friends, participation in sport provided an avenue for participants to escape from the unhealthy coping mechanisms and participate in healthy exercise. By reaching small goals, one at a time, this gave them a sense of achievement that gradually built their confidence and led to improved psychological well-being. Family and friends highlighted this, stating:

It raises focus and a will to achieve and believe once again. Sport provides immediate short and long-term feedback, and they can see the progression (UK F&F, Q)

(Sport) gave him more confidence. Led him to create new goals. Eventually led him to medical school - sport and health promotion was vital to his recovery (Canadian F&F, Q)

It gave her a purpose, a reason to get up in the morning. It gave her a sense of worth that she's been ignoring and opened her eyes to her abilities (UK F&F, Q)

I think sport allows him a time to focus on himself wholly. It gives him drive and confidence. Without it he feels less of himself. Sport lets him achieve small goals daily (Canadian F&F, Q)

This can also be evidenced by an Australian female F&F's (Q) claim that sport had helped their friend or loved one 'take his mind off the incident and the pain and suffering' that followed.

While it is likely that this distraction was an amalgamation of things, rather than just the taking part in sport, the physical and mental effort required to take part in sport distracted and gave him a purpose. Put simply, one team manager noted that the Invictus Games and training for the games, "gives (their) athletes an impetus." Faulkner and Sparkes (1999) noted that exercise programmes can act as a distraction from normal activities. In this instance, sport offered a distraction that ultimately helped competitors form a new purpose and a greater appreciation of their existing ability.

The second coping mechanism was sport as a release for aggression. Respondents explained a feeling of losing independence and purpose when going from highly physically active and independent individuals to being largely or wholly dependent upon others to do even the simplest daily tasks, as their perceived ability to self-determine the trajectory of their own lives was snatched away from them. As one American F&F respondent (Q) stated ‘He now has to rely more on us (his family) than ever. This is difficult for a soldier to lose their independence’. The impact of this lack of independence often took the form of emotional outbursts as highlighted thus:

Being incapable of independence, my wife would lash out at those closest to her. It is incredibly hard to go from being the best at everything you do, to bed ridden and she would take her frustration out on us (American FF respondent, Q)

The impact of injury or illness on the competitors and the feeling of losing independence frustrated competitors. This was highlighted by two Australian F&F respondents (Q) stating, ‘frustration, feeling out of control, had a huge impact on our relationship’ and the ‘relationship with myself and our children suffered due to him being very withdrawn.’ These emotional impacts made the competitor difficult to be around, placing a strain on the relationship as highlighted by an Australian F&F respondent (Q) stating that their loved one was a ‘completely different person. Very angry, frustrated, and depressed. He was difficult to be around’.

For many, sport helped release anger and provided a safe channel for aggression. As one team manager stated, “sport gives the athlete a change in demeanour, a place to go release the pain and smile more.” Examining a sport for development programme, Holt, Scherer, and Koch (2013), found that floor hockey offered an important safe place for aggression to be released, but in a positive way. In our case, we see that the safe space of training for the Invictus Games allowed participants to release aggression in a positive manner.

He is definitely much more calm and happier when keeping busy with sport (Australian F&F, Q)

Regaining her independence and motivation gave her an outlet for her frustrations.

Outbursts of unwarranted anger became few and far between (American F&F, Q)

A male German competitor (FG) briefly indicated how participation in sport and training for the Invictus Games helped moderate his anger and aggression when he stated that 'it makes me come down, sometimes I have so much energy to explode...training makes me calm down and channel my energy.' This moderating of anger and aggression was an important point for all concerned as highlighted by an American F&F respondent (Q) who pointed out that 'when he isn't participating there is more tension at home'. Baguley et al. (2006), examining predictors of aggressive behaviour among traumatic brain injury survivors, concluded that depression was the factor most significantly associated with aggressive behavior at all times post-injury, followed by a younger age at the time of injury.

Participants are, therefore, impacted by a 'double whammy' assault upon their identity, often brought on in an extremely short space of time due to the nature of many traumatic injuries. Their identity as strong, fit, non-disabled military personnel is taken from them, which can have a significant impact upon their psychological well-being. This loss of identity appears to manifest itself in emotional outbursts, brought on by anger and frustration at a perceived lack of control over their lives. There are similarities here between the emotional responses of elite athletes to sustaining a major injury. Faris (1985) claims that emotions such as fear, anger and depression are common responses to traumatic injury and can impact self-worth of elite athletes.

As a way of coping with this sense of confusion and loss that comes with injury, it appears that many military personnel simply cut themselves off from the world and disappear into themselves, which is a common coping mechanism amongst those who suffer traumatic

incidents. Scheenen et al. (2017) claim that the most common definition used for coping is that of Lazarus and Folkman (1984), who define coping as the cognitive and behavioural efforts to manage the internal and external demands of situations that are appraised as stressful. One way of doing this is the idea of 'withdrawal', which Frederick (2017) claims is conceptualised in the stigma literature as a general orientation toward retreating from others who might stigmatize them. Seymour (1989) summed this stigmatization up, stating:

The body in which I live is visible to others, it is the object of social attention. I learn about my body from the impressions I see my body make on other people. These interactions with others provide critical visual data for my self-knowledge (Hargreaves, 2000, p. 185).

Scheenen et al. (2017) call this disengagement coping, which is an emotion-focused mechanism that attempts to diminish discomfort by lessening opportunities to be around people that are perceived to be likely to provide negative responses to the individuals' new situation, thus undermining their sense of self-worth. The fact that they withdraw even from those closest to them (e.g., friends and family) highlights the power of ableist conceptions of ability and disability and how these narratives can be internalized, leading to withdrawal from anyone they fear may judge them or pity them for their new situation (Campbell, 2009).

4.2.3 Renewed sense of (Military) Camaraderie and Social Relatedness.

A contributing factor to the stress placed upon relationships was a feeling amongst family and friends that the competitors felt their loved ones were unable to relate to what the competitor had been through and were going through. An American F&F respondent (Q) stated that their loved one 'wanted to be alone, was depressed, sought companionship outside our relationship, because he felt that because I was not in the military, I did not understand him'. They were not referring to romantic companionship, but that of other military personnel who were better able to relate, further highlighting the importance of the military identity to the competitors as their dominant

identity and the in-group – out-group dichotomy that this can lead to. This can be partly explained by Starling's (2017) claim that 'one of the central tenets of any armed force is that the members are special – that, simply through earning the right to wear the uniform, they're set apart from the civilian herd' (pp. 108-109). With a military mentality strongly emphasizing the military identity as key to their survival and demeaning what it means to be a civilian, it is understandable that they might deem friends and family as not being able to understand their needs. This difficulty to reconnect with people was highlighted by this New Zealand competitor (FG):

That's a very difficult first step to take. Letting people know what's going on with you. It's frightening, but at the same time it allows people who do care about you, it allows them to support you in ways that you never even imagined that they could or would.

Following the onset of their injury or illness they need their close family more, which is difficult to accept. From the perspective of family and friends this adds to the frustration and strain on the relationship, as one Australian F&F respondent (Q) pointed out, 'It's painful to watch him suffer and it's frustrating not being able to help'. An American F&F respondent (Q) also highlighted the fact that it is a learning process for all concerned and that given the need for independence it is possible to try too hard to help: 'when my son got injured it changed a lot of things for all of us. We as a family wanted to take care of him - almost too much'. Acceptance of their move from non-disabled military personnel to disabled civilians is not easy but forms a key part of post-traumatic growth and an acceptance of their new situation (Smedena & Ebener, 2010). Although competitors may, over time, come to accept that they cannot get by without some help from their loved ones, it is not always an easy process, with one UK F&F respondent (Q) claiming that 'sometimes he does not tell us things, which we think is a way of taking back control'.

Being surrounded by other military personnel in a sport setting provided the participants with a sense of military camaraderie and a sense of physicality in a familiar and comfortable environment, allowing them an opportunity to partially reconnect with the military identity that is so important to them (Roberts et al., 2020). One female Danish competitor (Q) stated that ‘being with other veterans I get the feeling of being with other comrades and feel safe and protected and supported - just like the army life in the field.’ The importance of this is summed up by Darlene Brown, an Australian competitor at the Orlando 2016 Games, who is cited in Starling (2017, p. 228) as claiming ‘only when I went to Orlando did I realise how much I’d been grieving for the whole military lifestyle, for the mateship and camaraderie.’ These findings support that of prior research (e.g., Carless et al., 2013; Shirazipour, Meehan, & Latimer-Cheung, 2017) that physical activity environments help injured veterans reconnect with others after the initial, often self-imposed, isolation that regularly occurs with the initial onset of injury or illness. Perhaps as a partial explanation of this an American F&F respondent (Q) pointed out that

Being in the military you always have a mission. When you get hurt your mission stops.

Sports competitions like the Invictus Games gives these athletes an outlet to push

themselves to different levels, create a team and have a mission again (American F&F, Q)

Sport has been shown to offer support whereby individuals work together and have social interactions that create meanings and relate to one’s self-identity (Carless & Douglas, 2004). By competing in sporting activities with other disabled former military personnel, participants hang on to part of their highly cherished military identity. Taken together, sport allows participants to believe they are not alone. Prior studies have emphasized the importance of support networks in helping elite disabled athletes overcome various barriers (e.g., McLoughlin et al., 2017).

According to Caddick and Smith (2014), having undergone similar traumas and having a shared military background enables military participants to understand and communicate with

each other more easily, thus facilitating supportive relationships. This is confirmed by the participants in this research with a male Dutch competitor (Q) stating, 'I have gotten to talk to other people like me and it has been comforting. It has given me hope to be more stronger (sic), be a better person' and a female Danish competitor (Q) who claimed 'I don't feel that disabled when doing sports with other injured. I realize that I'm not alone and that it's okay to be me with my disability.' The fact that this competitor did not feel alone when participating with others is something that has been reported previously by Hawkins et al. (2011) who found that participants in their research 'often spoke of comparing themselves to other injured service members who had more severe injuries than themselves' and that this comparison of differences in abilities seemed to motivate them to continue their participation in sport and physical activity. By way of a possible explanation for this process a male competitor from New Zealand (FG) stated:

You balance what you've been through with what other people have been through.

There's no room for sympathy round here, but you know, when a player has only got one functioning limb left and they're feeling sorry for you because you've got cancer and you're sitting there saying oh you know, I may have cancer but it's being treated and I'm dealing with it but at the same time, I'm still sitting here with a full complement of limbs.

Why are you feeling sorry for me? But I don't feel sorry for this guy because I've seen what he's done. He's won a swag of medals and his whole attitude towards life is this is where I am, this is what I've got, this is what I do, and I will do it to the best of my

ability. And his best is pretty damn good. So, as I said, it's all about perspective. (Male

New Zealand Competitor, FG)

5. Limitations

One of the potential limitations of this research is that those competitors who were in Orlando are those for whom competitive rehabilitation has worked well, they have enjoyed it, and they have

been chosen to represent their countries. Because competitive rehabilitation proved to be a positive experience for those who took part in this research, it is possible that they are likely to provide biased responses, believing that sport contributed positively to their rehabilitation process. It would be useful to carry out research with injured military personnel who did not get selected to see if they hold similar or differing views to those presented here. We are cognizant of the fact that competitive rehabilitation is not a panacea for all disabled military veterans, and it would be worthwhile investigating the experiences for those whom it failed to provide a positive experience. Second, there were few female athletes at the Invictus Games. Although we did collect data from 23 female participants, we did not specifically explore issues related to gender and disability dynamics within the context of injured veterans. Finally, as part of the data collection agreement, we were asked not to collect information about participant injuries. We recognize that different injuries could influence the effectiveness of the rehabilitation process.

6. Conclusion

Disability is often portrayed, within an ableist conception, as being about weakness and dependency, especially when compared to non-disabled individuals. This may partially explain the initial reactions of the competitors to their injuries or illnesses, in line with the findings of Lundberg et al (2011). Added to this is the military mentality they have been inculcated into that often serves to reinforce an ableist perspective (Starling, 2017). Thus, it is perhaps unsurprising that these reasons may lead to an identity crisis. As pointed out by Cooper et al. (2018), this identity crisis may be especially true for those who are forced to return to a civilian life, particularly when combined with the loss of structure that a military life afforded them. Their newly acquired injuries or illnesses mean that their military identity is stripped away and they feel no real connection to the newly acquired civilian identity. The impact of this loss of their dominant social identity is in keeping with the work of Tajfel and Turner (1986) and, in turn,

leads to significant frustration and, for some at least, to depression, withdrawal and aggression, and in extreme cases the use of alcohol or drugs as a coping mechanism.

However, following conventional rehabilitation to optimise all available function (Harvey et al., 2012), participants in this study found that sport or competitive rehabilitation, as some called it, brought with it several potential benefits that assisted them in moving towards some semblance of post traumatic growth. Sport and competition allowed participants to come to terms with aspects of their new identities as disabled individuals, which is in line with the Tadeschi and Calhoun (2004) and Smedena and Ebener (2010). According to the participants, moving forward toward a new normal occurred in several ways. First, observing other people with similar or more severe levels of impairment who were still achieving major success in sporting activities enabled them to feel less alone as well as see what could be achieved, in line with previous findings (e.g., Hawkins et al., 2011). Second, as previously highlighted by Caddick and Smith (2014), the reconnection with other military personnel in a similar situation to them allowed them to be around other people who they felt would understand them and the way they were feeling, as well as reconnect with their cherished military identity. This enabled many of the participants to slowly come out of their self-imposed isolation and start to interact again with those around them. Beginning to re-interact with those around them is an indication of a move towards post traumatic growth (Smedena & Ebener, 2010). Third, there was a decrease in the reliance on unhealthy behavior (e.g., drugs or alcohol) as a coping mechanism for their situation, which is in keeping with Warner's (2019) findings that sport can serve as a kind of medicine if there is a team structure, a place to be accountable, and a place where nobody is left out. For some, sport acts as a release for their pent-up frustration and aggression at their new situation, which allows them to be calmer and possibly be more accepting of assistance from those closest to them. Although the connection between sport in general and the release of aggression is well-

documented (e.g., Lee & Lim, 2019; Pačesová & Šmela, 2020), there appears to be little discussion in the literature about the connection between sport, rehabilitation and the release of frustration and aggression caused by sudden onset disability.

Through sport as a supplemental route to rehabilitation, participants developed a new identity of sorts. This is important for military personnel when returning to civilian life in general. Green (2012) claims the dominant military identification, through categorisation and personal identification, provides individuals with a purpose and role that shares common ground with their in-group (the military) and is relatively different to their out-group (civilians). When entering the military, recruits surrender their identity in their initial process of socialization into the military and construct their new identity during re-socialisation (Christensen et al., 2018) into an organisation that guides itself upon echelons of rank and fitness set against a backdrop of authoritarianism (Green, 2013). When the participants in our study were injured, they lost that identity. Through sport, the participants found a new guide to follow that allowed them to re-socialize with and through those with whom they identified.

This has several implications. First, although this study was delimited to a specific injured veteran population, the benefits participants and their families described in regard to the training and Invictus Games competition suggest that there may be opportunities for other injured military personnel to benefit. Our use of ableism, social identity, and PTG as lenses through which to view the findings provided an explanatory framework allowing us to show how an ableist narrative might underpin the negative impacts upon the social identities of competitors and the various ramifications this can have on various aspects of their lives. It also enabled us to highlight how competitive sport, after sufficient conventional rehabilitation, appears to have helped these participants achieve a new 'normal' within their lives that enables them to focus

more on what they can do rather than what they have lost, as well as to reconnect with the aspect of their social identity that they appear to miss the most – their military identity.

Overall, it would appear that the participants taking part in the Invictus Games had, through participation in sport/ competitive rehabilitation, achieved a level of post traumatic growth that helped them undergo a significant improvement upon their outlook on life. This helped them adjust to their new situation to such an extent that they no longer concentrate on their physical loss and their change in physical ability, but instead have developed an appreciation of their existing ability i.e., they have achieved, or are at least moving steadily towards, a new ‘normal’.

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