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Unveiling the Influence of Competitive Sports on the Sense of Self and Identity of Disabled Veterans: A Systematic Review and **Mixed-Methods Synthesis**

Anna Hendrick, Eve Binks, Neil Ferguson, and Lisa Di Lemma

Psychology, Liverpool Hope University, Liverpool, UK

ABSTRACT

Veterans can encounter identity struggles upon departure from the military which are intensified if veterans have sustained a disability or life altering injury. Physical activity has been shown to empower disabled veterans to cultivate a positive post injury identity. The purpose of this systematic review was to synthesize the evidence available on disabled veterans' experience participating in competitive sport and explore the impact competing has on their self-identity. Studies were eligible if they were: 1) Published in English between 2012-2023 in a peer reviewed journal; 2) included veterans with a disability who participated in competitive sports; 3) explored veterans' selfidentity. Searches were conducted in four databases: SportDiscus; PsycInfo; Psycharticles; EBSCO. Nine articles met the eligibility criteria. Studies were assessed and a convergent integrated mixed methods synthesis was carried out. Findings were aggregated into three themes: 1) The importance of social connections for self-identity; 2) Self-views and quality of life; 3) Sport and the establishment of a new self. Competitive sport enables disabled veterans to cultivate a positive post-injury identity, whilst also restoring an affiliation with their previous military identity. Findings suggest that competing in sports positively impacts disabled veterans' identity recovery.

KEYWORDS

Self; identity; disability; veteran; sport

Introduction

As military personnel transition from service to civilian life, their self-identity becomes impacted, particularly for those who have endured disabilities or life-altering injuries during service. Acknowledging the therapeutic potential of physical activity, this systematic review delves into the intersection of disabled veterans' participation in competitive sports and the consequential impact on their self-identity. By synthesizing existing evidence, the review offers valuable insights for tailored rehabilitation strategies and support frameworks.

The difficulty of veterans' transition to a post-military life

Military personnels' sense of identity and self-understanding is profoundly impacted by the institutionalization process they go through when first joining the armed forces, where recruits begin to internalize the values and goals of the military, adopting them as their own and developing a highly salient military identity (Binks et al., 2018; Hammond, 2019). This process detaches recruits from their sense of individuality and disconnects them from their civilian identities, instilling a sense of cohesion and interdependence with fellow military personnel (Smith & True, 2014). Personnel with highly salient military identities can experience difficulties establishing a coherent self-understanding when departing the military due to the dissonance that exists between their military and civilian identities (Binks et al., 2018; Smith & True, 2014). Departure from service is considered to be a transformational process for veterans' identity structure (Meca et al., 2021; Smith & True, 2014) igniting feelings of loss in relation to their military identity and the camaraderie that accompanies military life (Ahern et al., 2015; Binks et al., 2018; Cardow et al., 2021).

Exiting the military due to injury

Unplanned departure from the military due to life-changing injury or disability intensifies feelings of identity conflict and presents a challenge to the conceptualization of a cohesive veteran identity (Higate, 2000; Lancaster et al., 2018; McCormack & Ell, 2017; Messinger, 2010; Orazem et al., 2017; Walker, 2012), as the loss of physical capabilities results in the loss of career and social networks and a potential loss of the sense of self that was attached to physical competencies (Besemann et al., 2018; Keeling & Sharratt, 2023; McGill et al., 2021). The resultant identity conflict and disconnect from civilian life has been shown to induce psychological distress, mental health issues, and negatively impact veterans' overall well-being (Besemann et al., 2018; Pease et al., 2015). Further support is therefore required for the recovery of disabled veterans beyond initial rehabilitation with issues of identity central to this process (Besemann et al., 2018; Evans et al., 2019).

The benefit of sport

Post-injury participation in sport and physical activity has been shown to be beneficial for disabled veterans' identity reintegration, enabling them to develop a positive post-military identity whilst reconnecting them with aspects of their previous military identity (Caddick & Smith, 2014; Carless et al., 2013; Fakolade et al., 2021; Hammond, 2019). Sports provide an avenue for disabled veterans to explore their potential and establish a positive post-military life, encouraging them to find new meaningful relationships, and experience a newfound sense of enjoyment (Carless et al., 2013; Fakolade et al., 2021). Participation provides disabled veterans with the opportunity to exhibit their physical capabilities to others and demonstrate to themselves what they are still able to achieve (Besemann et al., 2018; Burke & Utley, 2012; Sporner et al., 2009). This fosters a sense of pride and an associated increase in self-esteem and self-acceptance (Burke & Utley, 2012; Caddick & Smith, 2014).

The value of team sport

The togetherness involved in team physical activity also reignites feelings of camaraderie that were prevalent during veterans' time in the military, helping them feel reconnected to their previously salient military identity (Caddick & Smith, 2014; Carless et al., 2013). By reestablishing a connection to their military identity in an environment that also facilitates growth, veterans are able to develop coherence between their past and present identities (Besemann et al., 2018; Caddick & Smith, 2014; Carless et al., 2013). This reconnection reignited a lost sense of purpose and allowed disabled veterans to feel motivated about life again (Burke & Utley, 2012; Caddick & Smith, 2014; Carless et al., 2013).

The power of competitive sport

Chockalingam et al. (2012) conducted a literature review examining the role sports play in the rehabilitation of injured veterans, revealing that these individuals are able to channel the positive psychological and physical traits they held prior to their injury through participation in sport. Participation in elite sports elevates disabled veterans' perceived post-injury status and supports



positive reintegration by offering a newfound sense of direction (Caddick & Smith, 2014). Therefore, Chockalingam et al. (2012) argued that elite sports should be implemented into rehabilitation programs for disabled veterans due to their power to improve physical and psychological health.

Social identity resources

Social Identity Theory (Tajfel, 1974) suggests that individuals are able to establish self-understanding and a sense of identity through identifying with the various social groups they belong to (Hogg & Reid, 2006; Hornsey, 2008; Islam, 2014). Individuals' self-understanding is profoundly impacted by their social group memberships (Jetten et al., 2017; Meca et al., 2021) and their ability to feel a sense of social belonging is fundamental to overall health and well-being (Jetten et al., 2017). Social cure theory suggests social identity processes are key components in understanding and managing health and wellbeing, due to the meaning and value individuals attribute to their social relationships and the support they receive from these groups (Jetten et al., 2012; Wakefield et al., 2019). Social cure literature indicates how the maintenance of a highly valued social identity that provides meaning and support is a fundamental determinant of individuals' physical and psychological health (Haslam et al., 2018; Jetten et al., 2012). In the civilian population meaningful social connections have been shown to reduce symptoms of anxiety and depression (Begeny & Huo, 2016; Bonetto et al., 2021) and positively impact the recovery process of those with acquired brain injuries (Muldoon et al., 2019), heart surgery (Haslam et al., 2005), and substance misuse disorders (Best et al., 2015). However, the absence of a salient social network can be a contributing factor to poor overall health (Haslam et al., 2018; Jetten et al., 2012, 2017). A positive social group membership can provide individuals with high levels of selfesteem, a sense of purpose, and improve individuals' overall quality of life (Jetten et al., 2017; Wakefield et al., 2020).

The Current study

Research is limited on the impact sport has on disabled veterans' self-perception and sense of identity. Previous reviews have focused on the impact sport and physical activity have on disabled veterans' health and well-being (Aitchison et al., 2022; Caddick & Smith, 2014; Chockalingam et al., 2012), but no review to our knowledge has focused on the impact competitive sport has on disabled veterans' sense of self and identity. Understanding this phenomenon is crucial as veterans' sense of self and identity has a fundamental impact on their psychological well-being, mental health, and their ability to reintegrate into civilian life (Besemann et al., 2018; Sharma & Sharma, 2010; Smith & True, 2014). The current review asks the specific question "what impact does participation in competitive sport have on disabled veterans' sense of self and identity?." This review defines "competitive sport" as an event that is oriented around achievement and the pursuit of being more successful than others (Clancy et al., 2016). In 2014, the Invictus Games emerged providing disabled veterans with more opportunity to participate in competitive sport, resulting in a greater need to understand the ramifications of competing for this population. This systematic review aimed to bridge the gap in knowledge by synthesizing the most recent literature available, to uncover the impact of competitive sport on veterans' sense of self and identity in order to ensure current recommendations for veterans' sport are grounded in the most recent and reliable findings.

Method

The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement (Page et al., 2021). PRISMA is an evidence based set of items comprised of a 27-point checklist that ensures the transparency, trustworthiness, and accuracy of the reporting of systematic reviews (Page et al., 2021). The process of data collection, appraisal, and

analysis was conducted independently by the first author, then these stages were checked by the second author. If disagreement arose the third author was consulted and a decision was made.

Eligibility criteria

The PICo (Population, phenomena of Interest, and Context) framework was employed for this review (Lockwood et al., 2015). Studies were eligible for inclusion if they met the following criteria: i) Population: Studies that investigated veterans that have acquired a physical or psychological disability; ii) Phenomenon of interest: Studies that explore aspects of self-identity; iii) Context: Studies that focus on the experience of participating in any form of competitive sports. All study designs, apart from reviews, were eligible for inclusion (Lizarondo et al., 2020). Only studies written in English that had the full text available were eligible. All studies included in this review had to be published in a peerreviewed academic journal between January 2012- September 2023. As previous work has reviewed literature prior to 2012 (Caddick & Smith, 2014; Chockalingam et al., 2012), the current study sought to expand these reviews and bring current knowledge up to date. For that reason, research was eligible for inclusion if it was published after 2012. Previous reviews of research in this area (Caddick & Smith, 2014) excluded gray literature in favor of focusing only on peer reviewed work to ensure only the most reliable and accurate sources of knowledge would be included in the results. The current study echoed this position.

Information source

An electronic search of the following databases was carried out: SportDiscus; PsycInfo; Psycharticles; EBSCO. In addition, manual searches were conducted on Google Scholar and the reference lists and "cited by" function of the eligible studies.

Search strategy

The search strategy is reported in Table 1.

Search results and data extraction

One hundred and sixty five articles (Figure 1) were retrieved and stored on the bibliographic software Zotero (2016). Articles were then downloaded on an Excel sheet, to manage the screening process (Microsoft Corporation, 2011a). Twenty four duplicates were removed. Studies were screened via title, then abstract, then full text. Nine studies were screened as eligible. Data extraction forms were then created in Microsoft Word (Microsoft Corporation, 2011b) to extract relevant information and the findings from the eligible articles.

Table 1. Search strategy.	
Field(s)	Search Term(s) Applied to Title (TI) or Abstract (AB) Fields Only.
Filter(s)	Years 2012–2023. Peer Reviewed, Academic Journal, English.
S1) TI or AB	Veterans OR Military OR Soldier
S2) TI or AB	Disab* OR Injur* OR Recov* OR rehabilit*
S3) TI or AB	Sport OR Parasport OR Games OR Compet* OR Elite
S4) TI or AB	Self* OR Identi* OR Percept* OR social
Combined Search	S1 AND S2 AND S3 AND S4
S4) TI or AB	Self* OR Identi* OR Percept* OR social

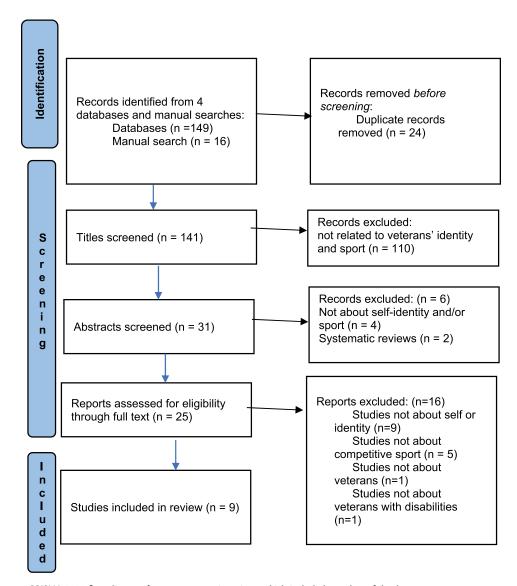


Figure 1. PRISMA 2020 flow diagram for new systematic reviews which included searches of databases.

Study risk of biased assessment

The Quality Assessment Tool for Studies with Diverse Designs (QATSDD) was employed to provide a quality rating score for included studies (Sirriyeh et al., 2012). The tool consists of sixteen questions, fourteen of the questions applied to quantitative studies and fourteen applied to qualitative studies. The additional two questions are employed for the assessment of mixed method studies; however, no mixed methods studies were identified as eligible for the current review. Reviewers scored each study on a scale from 0 to 3 for each of the criteria based on predetermined requirements. The score of 0 was the lowest score rating and given if the reviewers judged there to be missing or a lack of detail for a specific criterion The highest score of 3 was assigned when reviewers judged a criterion as being fully explained and justified. Each study was therefore given an overall quality score, the sum of these provides an overall score for the body of evidence, which is presented as a percentage of the potential maximum score. All studies received a good quality score with the overall percentage score of 83.6%.

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Table 2. Study characteristics and quality assessment score.

			Quality	
Study	Method and Design	Participants	score	Findings
Brittain and Green (2012)	Secondary qualitative data analysis. Life course analysis.	Data were newspaper articles and 31 internet articles (data collection: January-June 2011) which focused on veterans who had been traumatically injured during combat, and who had engaged in sport as part of their rehabilitation. Focusing on the link between the military and the National Paralympic Committees, the aim of the study was to establish the impact of sport on injured military personnel	31/42	1) Elite sport enabled disabled veterans to experience a sense of achievement and self-actualisation; 2) Participation gave participants a sense of direction and hope that their journey would inspire fellow veterans with acquired disabilities. Results demonstrated the impact participation in competitive sport has on veterans' self-views and can help develop a new sense of purpose.
Brittain et al. (2022)	Qualitative In depth-focus groups, semi-structured interviews, and open ended questionnaire.	This study explored the impact of sport on the rehabilitation of veterans who have experienced traumatic injury or chronic illness. 153 competitors at the 2016 Invictus games; female (n=23); male (n=130), from 13 different countries.	37/42 88%	1) Competitive sport allowed disabled veterans to accept their new post-injury identity and develop a new post-military identity. 2) Veterans reconnected with their highly salient military identity. Results showed the positive impact competitive sport has on disabled veterans' identity reconstruction and social relationships.
Laferrier et al. (2015)	Quantitative Cross-sectional design (Questionnaires)	The purpose of this study was to investigate the effects sport, exercise, and recreation participation has on the self-esteem and quality of life of disabled veterans. Examining years spent participating and type of activity. 220 U.S. service members/ veterans with disabilities who participated in one of three annual adaptive sporting events. Warrior Games: Female $(n = 10)$ Male $(n = 89)$. Nation wheelchair games. Female $(n = 12)$ Male $(n = 8)$ National veterans summer sports clinic. Female $(n = 8)$ Male $(n = 44)$.	38/42 90%	 Sport was found to have a positive impact on disabled veterans' psychosocial health, quality of life, and self-esteem. Results reveal that sport improves disabled veterans' self- perception and social well-being.
Laferrier et al. (2017)	Quantitative Longitudinal study (Questionnaires)	The purpose of this study was to examine the longitudinal effects of sport, exercise, and recreation participation on disabled veterans' self-esteem, depression, posttraumatic growth, and quality of life. 163 participants: either active duty service members or veterans of all branches of the United States Armed Forces. Participated in Sport, Exercise, or Recreation (n=91). Female (n=16) Male (n = 75). Non-participants (n = 72). Female (n = 9) Male (n = 63).	29/42 69%	1) Disabled veterans who participated in sport had higher selfesteem, higher rates of quality of life, and lower depression scores compared to non-participants; 2) veterans participating in a team sport had the highest levels of self-esteem; 3) Higher levels of self-esteem, lower rates of depression, and increased quality of life were found in those who participated in sports on a long term basis. Findings revealed long term participation in a team sport improves veterans' self-esteem, social health, and quality of life.
Martin et al. (2023)	Quantitative Cross sectional design (Questionnaires)	The aim of this study was to examine if disabled veterans' military, athletic, exercise, and disability identities would predict their level of life satisfaction and if this would be mediated by physical activity. 71 military veterans from the USA with an impairment or disability who participated in sport and exercise. Female $(n = 7)$ Male $(n = 64)$.	33/42 79%	 Holding a salient military and athletic identity increased veterans' satisfaction with life. Results reveal that sport participation allows the adoption of a new athletic identity and increases veterans' life satisfaction.
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	Findings	1) Competitive sport was found to be a source of motivation for disabled veterans; 2) Sport enabled veterans to reconnect with their military identity, improving their social well-being; 3) Sport enabled veterans to establish a new role in life, improve physical fitness, and foster new relationships. 4) Some veterans found participating in competitive sport to be a negative and stressful experience. These results highlight the personal and social benefits competitive sport has on disabled veterans, whilst also indicated how the competitive environment an induce stress for some.	1) The competitive nature of sport helped disabled veterans	reconnect with their military identity; 2) Sport helped veterans establish a new role; 3) Sport allowed veterans to experience enjoyment and improved their sense of self-competence. These finding indicate how the competitive nature of sport improves veterans' social well-being, sense of purpose, and physical fitness.	 Sport facilities team cohesion and improved social well-being; Sport fostered a new sense of identity for disabled veterans. Findings highlight how sport can help disabled veterans develop a new positive post military identity. 	1) Sport participation was a source of enjoyment and social connection for veterans; 2) sustained participation helped veterans develop a sense of pride and self-confidence; 3) Sport helped veterans reconnect with their military identity. These findings indicate that sports participation provides disabled veterans with the opportunity to reconnect with their previous identity and develop positive post military self-views.
Quality assessment	score	41/42 98%	37/42	% 88 88	38/42 90%	32/42 76%
	Participants	This study explored the experiences of disabled veterans who participated at the 2016Invictus Games. 15 UK participants at Invictus Games. Female ($n = 5$) Male ($n = 10$).	This study investigated the impact competing in competitive	motorsport had on injured and disabled veterans' subjective well-being and quality of life. 14 participants who were members of KartForce. (All male)	This study explored disabled veterans' perceptions of quality physical activity experiences. The sample consisted of 18 physically disabled veterans UK $(n = 9)$, USA $(n = 6)$, and Canada $(n=3)$ Female $(n = 3)$ Male $(n = 15)$.	This study explored what outcomes disabled veterans perceived as contributing to a quality experience when participating in sport. 18 veterans from Canada $(n = 3)$, the USA $(n = 6)$, and the UK $(n = 9)$. Female $(n = 3)$ Male (15).
	Method and Design	Qualitative Semi-structured interviews	Qualitative	Semi-structured interviews		Qualitative Semi-structured interviews
	Study	Roberts et al. (2021)	Serfioti and	Hunt (2022)	Shirazipour et al. (2017)	Shirazipour and Latimer- Cheung (2020)



See summary in Table 2. Full Tables (Table S-1 and Table S-2) are available in supplementary materials.

Synthesis method

Based on the Joanna Briggs Institute recommendation (Lizarondo et al., 2020), this review was best suited to follow a convergent integrated approach as there is a single phenomenon of interest that can be addressed by both qualitative and quantitative data (Stern et al., 2020). The synthesis was carried out in accordance with the steps outlined by Lizarondo et al. (2020): findings and relevant information were extracted from the included studies into data extraction forms. Findings were coded; codes were then clustered together based on their conceptual similarity. During this point quantitative data was qualitized, this process involved transforming quantitative data into textual descriptions to produce a narrative interpretation of the data, allowing reviewers to pool all data during the aggregation process. Initial clusters were then aggregated into six categories, which were then further aggregated into the final three themes (Lizarondo et al., 2020; Stern et al., 2020). See Figure 2 and Figure S-1 for further detail.

Results

The aggregation of the study findings produced three overarching themes: 1) The importance of social connection for self-identity, 2) Self-views and quality of life, 3) Sport and the establishment of a new self (see Figure S-1 and Figure S-2 in supplementary materials).

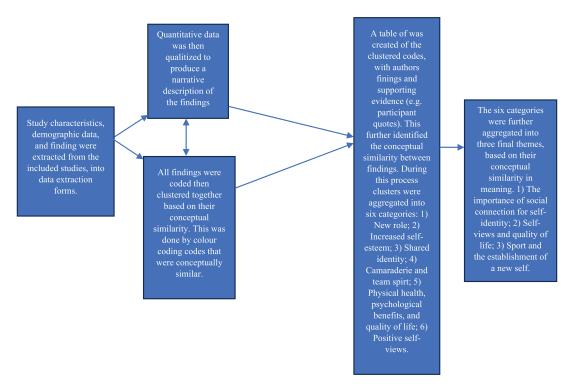


Figure 2. Figure showing the convergent integrated approach to synthesising data.



Theme 1: the importance of social connection for self-identity

This theme explores the impact sport has on the social relationships of disabled veterans' and how these relationships affect veterans' identity (Brittain & Green, 2012; Brittain et al., 2022; Laferrier et al., 2017; Roberts et al., 2021; Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020; Shirazipour et al., 2017).

Veterans explain that since exiting the armed forces they felt a sense of loneliness and isolation, feeling as though they had lost the sense of belonging that was so prominent during their time in the military (Roberts et al., 2021; Serfioti & Hunt, 2022). Serfioti and Hunt (2022) explain that being a member of a competitive sport team ignites bonds to be formed between fellow veterans. These bonds were considered important to veterans as their teammates had also experienced life altering injuries and shared similar mind-sets. This connection with other ex-service members helped veterans to reconnect with aspects of themselves that they perceive as not being accepted in civilian life (Serfioti & Hunt, 2022):

Being with other people who have got that same mentality, which is probably the best outcome because you all strive for the same thing, you all want to achieve the same goal, and essentially you can all then achieve that goal. (Hugh; page 44; Shirazipour et al., 2017)

When veterans are surrounded by other ex-service members in a non-clinical setting, they feel as though they are in a familiar environment and are re-living military experiences (Serfioti & Hunt, 2022). Reconnecting with their previous military identity and reestablishing those military bonds is important for veterans, as their military identity remains highly cherished and salient to them (Roberts et al., 2021; Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020).

The strong sense of camaraderie was a source of emotional support for veterans' post-injury and they expressed feelings of excitement and gratitude for the opportunity to be part of a team again (Roberts et al., 2021; Shirazipour & Latimer-Cheung, 2020). Veterans expressed how team sport induced a sense of passion for life post injury (Roberts et al., 2021):

I have a passion for team sports and I am desperate to be a part of a team, particularly one as cohesive and driven [as the UK team]. I really wanted to be a part of a successful team whilst I still could be; it was a part of my life post-Service that I needed, feeling part of a team. (Participant 8; page 3556; Roberts et al., 2021)

Serfioti and Hunt (2022) report how the strategic planning and team debriefing involved in competitive team sport was what facilitated the environment for veterans to feel a sense of belonging and a sense of purpose. This encouraged them to apply prior military knowledge to the situation (Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020): "Feeling of being alive. I am alive. It also makes me feel like it's the closest feeling I've got to being, going to Afghanistan, where I was at my best ever" (P1; page 7569; Serfioti & Hunt, 2022).

Laferrier et al. (2015), Shirazipour and Latimer-Cheung (2020) and Serfioti and Hunt (2022) outline the long-term impact of sport participation on veterans' psychosocial wellbeing, suggesting the social environment required for sustained participation improved veterans' overall well-being by reducing feelings of loneliness and isolation. Serfioti and Hunt (2022) suggest that team spirit is lacking in civilian life and sport reignites that sense of togetherness: "I actually missed that camaraderie and support that the military family offers each other and was so apparent at the 2014 Games" (Participant 9; page 3556; Roberts et al., 2021).

Veterans also note how long-term participation gradually improved their civilian social relationships (family, friends, or wider community) (Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020). Roberts et al. (2021) found that, for Invictus games competitors, civilian relationships were an important factor in continued motivation for competition, with role model aspirations an important issue. Serfioti and Hunt (2022) further note how wanting to be a role model allowed veterans to engage in family and social roles:

I wanted to be a role model to my daughter. I don't want my disability to define me for the rest of my life. I mean, I know that it will but I don't want that label when my daughter thinks of me in the future. I want her to see that I held down my job, was a successful athlete, and that I had a fulfilled life. If I can show her that I can win gold medals and be competitive, then she can hopefully feel capable of doing that and more in the future. (P3; page 3556; Roberts et al., 2021)

Conversely, Shirazipour et al. (2017) observed that some veterans perceived a lack of acceptance among teammates because of their varying disabilities, indicating a hierarchy of injuries where those with non-visible injuries or injuries perceived as less traumatic felt marginalized or overlooked, while Roberts et al. (2021) indicated a difference in motivations and goals as a catalyst for lack of cohesion between teammates, while the similarities in culture between the military and competitive sport was perceived as a stressor for some veterans:

I didn't find it easy to begin with. I had got used to being away from the military mentality and the stupid jokes and banter, but putting myself back in that situation was different. I don't think I had thought about how different the mentality was when I was away from it. (Participant 6; 3557; Roberts et al., 2021)

Theme 2: self-views and quality of life

This theme comprises data from all nine studies and discusses how competing in sport impacts veterans' self-views and improves their quality of life.

By participating in sport veterans reportedly experienced a sense of pride and increased positive mood states (Shirazipour & Latimer-Cheung, 2020). Many disabled veterans competing at an elite level valued the opportunity to be a representative of their country again during national and international sporting events where the wearing of their countries flag led to feeling of value (Brittain & Green, 2012; Roberts et al., 2021; Shirazipour & Latimer-Cheung, 2020):

It was a sense of pride to be able to do it for Canada mostly, more than for myself. So it was a huge, I guess, sense of accomplishment and pride to do this and having our flag and our anthem being played and the lot. I guess it is a great sense of accomplishment that I had not felt in a long time. (Celeste; page 569; Shirazipour & Latimer-Cheung, 2020)

Serfioti and Hunt (2022) emphasize veterans' appreciation of being able to have a sense of responsibility again, with the athlete role providing a sense of purpose and aspiration for veterans and sport allowing a reconnection with sense of purpose and meaning once found in military service (Roberts et al., 2021; Shirazipour et al., 2017). For disabled veterans, Martin et al. (2023) found military identity to be more salient than disabled identity, where veterans with the strongest military identities were found to have the highest life satisfaction scores. Martin et al. (2023) also found that having a salient disability identity was associated with less participation in physical activity, suggesting that veterans' self-views are transformed through participation in competitive sport.

When you join the military, you're important, you're told that you're part of something bigger, you're part of a very large machine that defends people and looks after the country and the world. Then, when you're injured, you're a broken part of that machine that gets taken out and replaced, and that sort of impacts on you mentally quite a great deal. (...) I'm seeing this now, my sort of transformation is I'm going into battle for them [fellow injured veterans] and for me it's sort of I've been empowered now and I feel sort of like I did like I was in the military. (Louis; page 45; Shirazipour et al., 2017)

Veterans also state that sport made them feel more capable and confident in their overall abilities, which helped them establish a new sense of independence (Shirazipour et al., 2017). This established sense of independence eased the transition process to civilian life (Serfioti & Hunt, 2022).

Brittain and Green (2012) and Roberts et al. (2021) indicate that veterans show a preference for competitive sport as a form of rehabilitation, allowing a more positive view of injuries and enabling a more optimistic perspective on life (Brittain et al., 2022; Serfioti & Hunt, 2022). This was expressed by one veteran who stated, "I do not know where I would be today with my rehab if it were not for these

dedicated individuals and the power of sports" (Canadian Forces Personnel and Family Support Services 2011; page 257; Brittain & Green, 2012).

Sport participation improved veterans' confidence in their physical fitness and capabilities, impacting positively on other areas of life such as confidence in seeking employment encouraged veterans to obtain previous fitness levels from their military training, and helped veterans lose the weight they had gained since the onset of injury, optimizing overall well-being (Brittain et al., 2022; Roberts et al., 2021; Serfioti & Hunt, 2022). This was exhibited as one participant explains "I lost over 35lbs that I had gained since my injury. I am feeling the best since a very long time" (Female Canadian competitor; page12; Brittain et al., 2022).

Laferrier et al. (2017) found that veterans who participated in sport had significantly lower levels of depression compared to both non-competitors and those who did not participate in any physical activity. Laferrier et al. (2015) also investigated the long-term impact of sport participation and determined a cumulative effect of participation with benefits to depression increasing over time, with Serfioti and Hunt (2022) suggesting increased happiness and emotional stability as a result of long-term participation. Additionally, both physical and social health domains of quality of life were significantly improved for those who had participated in sporting events compared to those who did not participate in any sport or physical activity (Laferrier et al., 2015, 2017). The challenge provided by competitive sport promotes healthy competition and allows veterans to establish self-respect (Serfioti & Hunt, 2022; Shirazipour et al., 2017) while encouraging skill development, evoking exciting experiences, and setting standards of achievement that encourage future goals (Brittain et al., 2022).

It's competitive. I like beating people ... I couldn't go to a track and just go around by myself. I'd have to have somebody else there. So, getting in the car... I'm starting to race cars now as well. And, yeah, that's it, really, that you very much live in the moment. So, there's nothing else that really matters (P10: page 7569; Serfioti & Hunt, 2022)

Theme 3: sport and the establishment of a new self

This theme explores how competing in sport increases disabled veterans' level of self-esteem and allows a new sense of self to be cultivated (Brittain & Green, 2012; Brittain et al., 2022; Laferrier et al., 2015; Martin et al., 2023; Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020).

Serfioti and Hunt (2022), Brittain et al. (2022), and Brittain and Green (2012) reported that competitive sport allowed veterans to come to terms with their physical disabilities, accept physical limitations, whilst realizing what they were still able to achieve, encouraging them to focus on their strengths rather than their weaknesses (Brittain & Green, 2012). "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" (Female Danish competitor: page 18; Brittain et al., 2022).

This sense of acceptance of physical capabilities increased veterans' levels of self-confidence and self-esteem (Serfioti & Hunt, 2022) with greater benefits seen in those competing in team sport than those competing only in individual sport (Laferrier et al., 2015).

I've stepped up and I'm part of Team BRIT as well . . . If you asked me a couple of years ago, it's something I could never have imagined I would be able to do ... have the ability to drive a race car, let alone deal with the pressure that comes with it. (PE; page 7570; Serfioti & Hunt, 2022)

Brittain and Green (2012) suggest that effective post-injury reintegration was promoted by increased levels of self-esteem developed as a result of sport participation, signifying the importance of sport in obtaining a successful rehabilitation and enabling disabled veterans to establish a new sense of normal (Brittain et al., 2022). Identity transitions were also navigated within the context of sport, with veterans' identity adaptation from soldier to disabled veteran to disabled athlete, with reduced levels of worry and stress (Brittain & Green, 2012; Brittain et al., 2022), This is illustrated by one veteran who



explains "Sport has aided me, I don't worry about my leg, I think about my times" (Razzall 2011; page 261; Brittain & Green, 2012). Martin et al. (2023) further indicate that the highest life satisfaction scores are seen in those veterans with the strongest athlete identities.

Shirazipour and Latimer-Cheung (2020) reveal that veterans use sport as a way to convey their competence to others (family; friends; the public), as well as to themselves. Shirazipour and Latimer-Cheung (2020) explain how veterans expressed a desire to construct a positive post-injury self-concept which was achieved by constructing an identity embedded around being an elite athlete (Martin et al., 2023; Shirazipour & Latimer-Cheung, 2020). This allowed veterans to be seen as competent and to resist being labeled as disabled as sporting arenas provide the appropriate environment for veterans to display their masculinity and toughness (Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020). Serfioti and Hunt (2022) argue that the development of a positive self-concept post injury is fundamental in facilitating a successful recovery and that this positive self-image is developed overtime through participating in competitive sport. "It's better than what other people can achieve despite the fact that I don't have legs. It makes me feel good about myself and makes me feel less disabled" (Henry; page 572; Shirazipour & Latimer-Cheung, 2020).

Discussion

This systematic review employed a mixed methods approach to synthesizing data, aiming to explore the impact of participating in competitive sport on disabled veterans' sense of self and identity. Findings from the nine studies included in the review revealed that competing in sport enables veterans to reconnect with their former military identity, whilst also helping them establish a new positive post-injury identity. Previous research on disability sport for the civilian population has outlined the positive impact competitive and noncompetitive sport participation has on individuals' physical health, self-esteem, sense of autonomy, social connectivity and improving overall mental wellbeing (Macímacías et al., 2022; Orr et al., 2019; Svanelöv et al., 2020). The current review identified these positive effects in the context of disabled veterans, finding that competitive sport is beneficial for improving social health, quality of life, and self-esteem.

Impact of sports on social belonging

The findings of the current review highlighted the positive impact sport participation has on disabled veterans' social connectivity and sense of belonging, revealing the bonds veterans formed within their teams both facilitated social identity continuity and social identity development (Brittain et al., 2022; Serfioti & Hunt, 2022). Haslam et al. (2021) propose a dual pathway approach to understanding protection from life change and the negative consequences that may accompany transition. First, social identity continuity occurs when meaningful social relationships remain salient post-transition. Second, the ability to develop new social identities that replace the lost identity (Haslam et al., 2021; Haslam et al., 2022). In line with social cure theory (Haslam et al., 2008) the current review elucidated that for veterans with sustained disabilities, participating in a team sport will be most beneficial in improving their sense of social integration and sense of self-continuity (Brittain et al., 2022; Laferrier et al., 2015; Serfioti & Hunt, 2022). This phenomenon nurtures a collective sense of community and camaraderie between fellow veterans, promoted by their similar life experiences that facilitates a sense of shared understanding and belonging. This reignited sense of group membership eased veterans' feelings of identity loss (Besemann et al., 2018; Brittain et al., 2022, Burke & Utley, 2013; Caddick & Smith, 2014; Carless et al., 2013; Haslam et al., 2021; Hawkins et al., 2011; Serfioti & Hunt, 2022; Sporner et al., 2009). Re-engaging with groups that hold similar values and beliefs that are grounded in their lost military identity encourages veterans to form meaningful relationships, increasing their selfesteem, and cultivating a sense of enjoyment (Burke & Utley, 2012; Carless et al., 2013).



Civilian relationships

Moreover, veterans' civilian relationships improved as a result of their involvement in competitive sport (Roberts et al., 2021; Shirazipour & Latimer-Cheung, 2020). Participation provides injured veterans' time away from family relations, allowing them to change perspective of their current situation, increasing their appreciation for their families (Carless et al., 2013). Competitive sport permits veterans to display their capabilities to their civilian communities, be a role model to their families, and view their friends and families as a support system (Roberts et al., 2021; Serfioti & Hunt, 2022). This indicates that veterans with disabilities are more willing to receive support from their families when involved in sport, due to the increased sense of autonomy and confidence that arises from pursuing physical challenges (Serfioti & Hunt, 2022). Current findings unveiled that by participating in an activity that heightens self-confidence, veterans are able to gradually begin to reintegrate into family roles and reconnect with civilian identities without feeling disempowered (Serfioti & Hunt, 2022). This is important for the veteran population as previous research found that veterans returning home from the military experience difficulty within their civilian relationships and struggle reintegrating into family roles (Sayers et al., 2009). The sense of independence veterans foster through competing in sport empowers them to form stronger bonds with their families, receive vital social support from these relationships, and maintain salient social connections crucial to a positive transition to post-injury life (Brittain et al., 2022; Carless et al., 2013; Haslam et al., 2021; Roberts et al., 2021; Serfioti & Hunt, 2022).

Challenges and negative experiences of competitive sport

The current review also uncovered that some veterans found the return to a military atmosphere stressful and experienced conflict within the team setting (Roberts et al., 2021; Shirazipour et al., 2017). This finding was only accumulated from two out of the nine included studies, with most studies reporting that veterans found the competitive atmosphere beneficial (Brittain et al., 2022; Serfioti & Hunt, 2022). However, these negative experiences have also been found in research conducted on the civilian population. Andersen et al. (2018) posited that in a population of nondisabled civilian adults, the competitive dynamics inherent in team sports were not beneficial for all participants; rather, this atmosphere induced stress and performance anxiety in some. Caution should, therefore, be taken when recommending a competitive sport pathway for disabled veterans. If an individual holds negative post-injury self-views, then the marginalization felt by engaging in sport could potentially lead to the verification of that negative self-view (Lundberg et al., 2011). Thus, future investigation should be undertaken to provide greater clarity of these experiences.

Long term impact of sport participation

Serfioti and Hunt (2022) and Laferrier et al. (2015) suggest the physical and psychological benefits of participating in competitive sport occur gradually, indicating that veterans should be encouraged to participate in competitive sport on a long-term basis. The need for sustained participation was also demonstrated by Walter et al. (2021) who found that without continued engagement in sport, veterans' initial post-participation improvements in levels of depression, anxiety, and social functioning were not maintained at a three month follow up. The current review findings indicate that longterm participation in a group-based activity will increase veterans' access to social identity resources and will help them develop meaningful relationships that will maintain and improve mental health and overall well-being (Haslam et al., 2022; Muldoon et al., 2019).

Developing a new athletic identity

The outcomes obtained from this review uncovered that disabled veterans are able to cultivate a new identity, integrate with new social groups, and establish self-acceptance through participation in competitive sport (Brittain & Green, 2012; Caddick & Smith, 2014; Carless et al., 2013; Laferrier et al., 2015). Lundberg et al. (2011) found that sport empowered civilians with disabilities to re-define their stigmatized identities by developing a new sense of self embedded in skill acquisition and social engagement. Current findings found that long-term participation in competitive sport encouraged disabled veterans to similarly develop and maintain a new athletic identity (Martin et al., 2023; Shirazipour & Latimer-Cheung, 2020). Elite level sport offers disabled veterans the opportunity to display their newly acquired skills in a domain where they serve as proud representatives of their country and receive public recognition that verifies their positive self-views (Lundberg et al., 2011; Roberts et al., 2021; Swann et al., 2007). The process of redefining their post-injury sense of self in an environment where they are required to display their physical capabilities, increases veterans' sense of pride and self-confidence (Brittain et al., 2022; Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020). The new athletic identities established by veterans are characterized by masculine attributes, including power, autonomy, and independence, that enabled them to view themselves as physically competent (Besemann et al., 2018, Evans et al., 2020; Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020). These traditionally masculine characteristics are rooted in military culture, where high conformity to traditional masculine qualities are expected and seen as core components of military identity (O'Loughlin et al., 2023). The findings of this review indicate that involvement in competitive sports allows disabled veterans to restore the attributes that were intrinsic to their previous sense of self and reconnect with their lost military identity (Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020). Martin et al. (2023) reported that veterans who maintained the strongest military identities were found to have higher levels of life satisfaction. While Roberts et al. (2021) and Serfioti and Hunt (2022) suggest that substituting a highly salient military identity with a newly acquired athletic identity can alleviate the negative impact of life transition for disabled veterans. Such a shift requires veterans to embody characteristics from their previous identity, helping them adapt to their present circumstances by fostering a sense of self-continuity (Haslam et al., 2021).

Competitive team sport

In accordance with the social identity model of identity change (Haslam et al., 2021; Iyer et al., 2009), the data gathered in this review exemplified that the psychological distress induced by loss of identity can be counterbalanced if individuals are able to develop new identities that replace the previous one. The development of new social identities helps facilitate veterans' transition process, by providing support in replacement of the lost social network (Wakefield et al., 2019). Engaging in competitive team sports offers disabled veterans a chance to develop a new salient athletic identity and reestablish themselves as a member of a team. Thereby reintroducing them to the associated benefits of belonging to a meaningful social group, such as increased self-esteem and improved quality of life (Brittain & Green, 2012; Serfioti & Hunt, 2022; Shirazipour & Latimer-Cheung, 2020). The establishment of a new social identity eases the difficult transition process faced by many veterans, providing them with a source of social support, reducing loneliness, and inducing a sense of collective efficacy (Brittain et al., 2022; Haslam et al., 2021; Haslam et al., 2022; Shirazipour & Latimer-Cheung, 2020). The notion of new meaningful social relationships enhancing veterans' overall well-being is echoed in research on civilian populations. Research exploring individuals' recovery after sustaining an injury or developing an illness, has revealed how meaningful social connections are fundamental for individuals' recovery process and improving their overall well-being and quality of life (Best et al., 2016; Haslam et al., 2005; Jetten et al., 2017; Muldoon et al., 2019; Wakefield et al., 2020).



Impact of findings

Competitive sport provides the ideal environment for veterans with disabilities to reconnect with their lost military identity and establish new meaningful social networks, allowing them to experience the associated benefits of social connectivity, such as increased self-esteem, sense of belonging, and improved quality of life (Brittain et al., 2022; Haslam et al., 2021; Jetten et al., 2017; Roberts et al., 2021; Shirazipour & Latimer-Cheung, 2020). Thus, social connectivity is evidently a core component of disabled veterans' ability to successfully reintegrate into a post-military life and experience overall physical and psychological well-being. Participation in competitive sports is a key component in helping disabled veterans access these vital social identity resources and be able to establish a sense of self-continuity, self-renewal, and self-esteem.

This systematic review updates the current understanding of the impact competitive sport has on disabled veterans. The findings of this review suggest that a fully rounded care plan should be implemented into the rehabilitation of veterans' who have experienced a life altering physical or psychological trauma. Competitive sport addresses the multifaceted biopsychosocial needs of veterans during the transition process of departing the military. Therefore, competitive sport should be recommended for those veterans who found fulfillment in their military experiences and who encounter identity difficulty during their transition to civilian life.

Limitations and recommendation for future research

Several authors indicate that previous research is heavily biased in favor of male participants (Brittain et al., 2022; Laferrier et al., 2017; Serfioti & Hunt, 2022; Shirazipour et al., 2017), and studies within the review failed to differentiate between the experiences of female and male competitors. Future research should seek to examine the experiences of female veterans in order to promote and encourage more female veterans with disabilities to compete in sport. Finnegan and Randles (2022) report higher rates of anxiety and depression in female veterans and with only 7% of women with disabilities competing in sport and women representing only one-third of disabled athletes in international competition. Therefore, encouraging greater female participation in sports is important given the crucial role sport can play in reducing gender stereotypes and challenging negative perceptions related to women with disabilities (United Nations, 2011).

Although two studies included in this review utilized the same data set for their results (Shirazipour & Latimer-Cheung, 2020; Shirazipour et al., 2017), analysis of the articles concluded that the differing focus of each study provided findings that were of equal and discrete value to the current review question. In some cases, study populations included disabled veterans, injured military personnel, and injured active duty service members (Brittain & Green, 2012; Laferrier et al., 2015, 2017), where other studies used participants that engaged in both competitive and noncompetitive sport (Shirazipour & Latimer-Cheung, 2020; Shirazipour et al., 2017). The review team were unable to discern the data, leading to the decision to include these studies in the synthesis because of their relevance to the review question. However, caution in generalizing these results to the broader population of disabled veterans is advised.

Acknowledging the risk of publication bias, the current review mirrored the decisions made in previous reviews (e.g. Caddick & Smith, 2014) and did not include gray literature. Future reviews may seek to provide a more inclusive overview of the literature (Adams et al., 2016).

Conclusion

The present review contributes to the current understanding of disabled veterans' experience of participating in competitive sport and the impact competing has on their sense of self and identity. Through an empirical mixed-methods synthesis three themes were developed 1) The importance of social connections on self-identity; 2) Self-views and quality of life; 3) Sport and the establishment of a new self. Findings suggest that participation in competitive sport allows veterans to reconnect with their previous military identity, whilst also enabling them to cultivate a positive post-military identity. These insights can help guide the development or optimization of health strategies and interventions, that are designed to prevent and manage the psycho-social challenges experienced by disabled veterans (Sayers et al., 2009). Besemann et al. (2018) outlined the bidirectional relationships that exists between an individual's identity and their well-being, explaining health status impacts one's sense of identity, whilst one's sense of identity has an impact on their mental health. Therefore, future studies should continue to investigate disabled veterans' self-perceptions and sense of identity, as the exploration of the multifaceted nature of identity has the potential to improve rehabilitation pathways and optimize well-being for disabled veterans. Future research exploring disabled veterans' identities should consider gender differences, disability type, and severity, to acquire greater understanding of the experiences and needs of different demographics of veterans.

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Author contributions

AH: Study design; data curation; formal analysis methodology; writing original draft, writing.

EB: Study design; supervision; review & editing.

NF: Review and editing.

LDL: Study design; supervision; review & editing.

Author note

The data that support the findings of this study are available from the corresponding author, AH, upon reasonable request.

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