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(Loss of) the super soldier: combat-injuries, body image and veterans' romantic relationships

Mary Keeling () and Nicholas David Sharratt ()

Centre for Appearance Research, University of the West of England, Bristol, UK

ABSTRACT

Purpose: Some military personnel sustain physical injuries that alter their appearance, such as limb-loss and scarring. Veterans injured this way may experience body image distress and mental and physical wellbeing difficulties. While research with civilians indicates those with appearance-altering conditions may experience relationship difficulties, this issue remained unexplored among combat-injured veterans. This study aimed to understand how veterans who sustained appearance-altering combat injuries experienced and understood their changed appearance within the context of their romantic relationships.

Materials and method: Semi-structured interviews with four male UK combat-injured veterans were conducted and analysed using Interpretative Phenomenological Analysis.

Results: Three superordinate themes were generated: (loss of) the super solider; new states of vulnerability; and injury tests relationships.

Conclusions: Masculinity was central to participants' military identity and represented by their military bodies. Following injury and the loss of their military body, some experienced relationship challenges including a test to the foundations and commitment of their relationships. In contrast, some veterans' relationships grew stronger, especially among participants who described dyadic coping. Additional challenges were related to decreased self-confidence, appearance concerns, and sex and intimacy. Implications for the provision of relationship support for combat-injured veterans and their partners through the long-term trajectory of rehabilitation are discussed.

► IMPLICATIONS FOR REHABILITATION

• Changes to veterans' body and physique following appearance-altering combat-injuries may affect identity, self-esteem, confidence, perceived attractiveness, sexual activity, and romantic relationships.

- Appearance-altering combat injuries may test the stability and strength of existing romantic relationships and introduce new challenges in initiating new romantic relationships.
- Peer support is helpful for combat-injured veterans adjusting to appearance-altering injuries and the impact on their romantic and intimate relationships.
- Combat-injured veterans may benefit from specific relationship support provided during their rehabilitation and recovery, to help alleviate relationship difficulties, minimise relationship breakdown, and support those whose relationships end post-injury.

The nature of military activities means some personnel receive life-changing physical injuries that also change their appearance (appearance-altering injuries), such as scarring and limb-loss. Between 2003 and 2019, 333 UK military personnel received traumatic or surgical amputations due to injuries sustained during combat in Iraq and Afghanistan. During the same period, 10,100 UK service and ex-service personnel were in receipt of Armed Forces Compensation due to 'injury, wounds and scarring' sustained during military service [1,2].

Emerging evidence indicates that military veterans who sustain appearance-altering combat-injuries may experience body image distress as well as symptoms of depression, anxiety, and social anxiety related to their changed bodies [3,4]. Research with civilians indicates that challenges associated with adjusting to a visible difference (e.g., an appearance which is different to the 'norm' such as scarring and limb-loss) can affect romantic relationships due to changes in self-esteem, body image, identity and sexual identities [5,6]. Longitudinal research indicates that burn injuries may negatively impact sexuality, body image, and relationship aspects of quality of life [7,8].

Evidence from qualitative studies with men and women with visible differences, including lower-limb amputations [5,6,9] indicates that internalisation of societal appearance ideals means appearance is considered fundamental to attractiveness. These studies found that feelings of being unattractive and fears of rejection may create barriers to relationship formation and among those in existing relationships create anxieties about whether their partner finds them attractive. Fears of rejection may mean some people with a visible difference experience anxiety disclosing their 'difference' to new potential partners for concern of how

CONTACT Mary Keeling mary.keeling@uwe.ac.uk 🗈 Centre for Appearance Research, University of the West of England, Frenchay Campus, Bristol, BS16 1QY, UK

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they may react [5,6,9]. Though conversely, some individuals may benefit from disclosure by using the potential partners' reactionsto screen out those whose character is deemed unsuitable for developing a serious relationship [5,6,9]. Those whose relationships become more established, report their relationships as being deeply rewarding and enriching due to feeling accepted, overcoming adversities together, feeling their relationship is durable and resilient, and the reflection that positive disclosure experiences can contribute to personal and interpersonal growth [5,6,9].

While evidence indicates that appearance-altering injuries and visible differences may impact civilians' romantic relationships, there is a paucity of research examining the impact of appearance-altering injuries on the romantic relationships of male combat-injured military veterans. Male body ideals may play a role in associations between combat-injuries, visible difference, and romantic relationships. In the Global North, the male body ideal is focused on function and a drive for muscularity [10]; mesomorphic, athletic, slender, well-proportioned V shape physiques, with good muscular definition and a slim waist and hips are valued [11]. Through these ideal male bodies traditional hegemonic masculinity such as dominance, strength, agency, and power are played out [12]. Arguably, in the military, masculine body ideals are heightened due to the highly masculine military culture. In joining the military and engaging in initial basic training, new recruits are socialised into the military, acquiring a highly masculinised soldier identity [13]. It is suggested that the military represents a direct link between hegemonic masculinity and men's bodies through the inherent discipline, control, exposure to risk, and physicality [14]. This physicality is demonstrated in physically able, fit and muscular bodies which are non-negotiable requirements of military service [15,16].

Among men with acquired disabilities such as traumatic limbloss and spinal cord injuries (SCI), traditional forms of masculinity are challenged [17–19]. Such challenges to masculinity due to changes in the body can impact self-presentation, body image, sexuality, and relationships [17–19]. Through ethnographic study at the Walter Reed Army Medical Center in the US, Wool proposes that attempts to balance the dilemma of masculinity and disability, in the US military rehabilitation context, are made by encouraging engagement in heteronormative relationships and sexual activity [18]. Thus, heteronormative relationships may play a more complex role in post-injury rehabilitation than the provision of social and emotional support.

Although engaging in heteronormative relationships may enhance feelings of masculinity and be beneficial for rehabilitation [18], concerns around appearance and body image may hinder the benefits of or access to romantic relationships and intimacy. Anecdotal evidence from Ellis [20] posits that "disfigurement of course affects an individuals' body image and perceived level of attractiveness" (pg. 2) and that body image and self-esteem are common concerns among war injured veterans [20]. Recent research from Ellis et al. [21] of three case studies of veterans using an Occupational Therapy Sexuality and Intimacy program at a Military Treatment Facility in the US, suggests that individuals with visible injuries must address self-beliefs related to their body image prior to injury and adjust them to their bodies post-injury. In discussing sex therapy for injured veterans, McGillivray [22], proposes that anxiety, poor body image and lack of self-confidence are linked to sexual problems and that injured combat veterans may experience reduced desire for sexual activities due to anxiety around body image. This is consistent with correlation data indicating that veterans with lower extremity amputations may experience problems with sexual functioning,

with the authors deducing that body image, psychosocial adjustment and interpersonal relationships are likely impacted by amputations [23].

Since, romantic relationships are often the primary relationship in adulthood, providing a fundamental source of support and a central identity role, which can be beneficial for health, wellbeing and recovery [24], understanding the impact of appearance-altering combat-injures on romantic relationships is important especially in the context of post-injury rehabilitation. While existing correlational, case study, and anecdotal evidence indicates US combat-injured veterans may have body image concerns which affect their sexual activities and relationships, research providing a more in-depth, focussed understanding of combat-injuries, visible difference (e.g., limb-loss and scarring) and romantic relationships among male UK combat-injured veterans is needed. This study therefore aimed to understand how physically injured male UK combat veterans whose appearance changed due to their injury, experienced and made sense of their changed appearance in relation to their romantic relationships.

Methods

Design

Interpretative Phenomenological Analysis (IPA) [25] was considered the most suitable approach to address the study aim. Rooted in phenomenology, IPA is committed to making sense of an individual's personal and social world and the meaning ascribed to experiences. IPA is concerned with experience of some existential importance to the participant [26]. Injury experiences and how they interact with relationships and appearance are likely to be significant to those injured and are therefore a natural topic for IPA investigation. Taking an idiographic approach, IPA does not intend to make generalisations about larger populations, instead the focus is on individual experience with the aim of generating themes that represent the convergence and divergence of experience within the study sample [25]. IPA is grounded in hermeneutics recognising the researchers' role in the research process, specially the 'double hermeneutic' of the researcher attempting to make sense of the participants' sense making. In keeping with IPA, semi-structured individual telephone interviews were conducted. Ethical approval for this study was obtained from the University of the West of England, Bristol, Research Ethics Committee, reference: HAS.19.09.023.

Reflexivity and researcher positioning

Consistent with the hermeneutic stance of IPA, the researchers engaged in a reflexive process prior to conducting the interviews and analysis. This included reflections of pre-conceived expectations and considerations of the influence of each authors' positioning. The first author is a white, heterosexual female in her late 30's, who never served in the military, has no immediate family links to the military, and does not have a visible difference. She lives with her partner and does not have children. The first author previously conducted research focused on the relationships of military personnel and with veterans who sustained appearancealerting combat-injuries. The second author is a white, heterosexual male in his late 30's, who never served in the military, has no immediate family links to the military although members of his extended family served in the British Army, and does not have a visible difference. He lives with his partner and their two children. He previously conducted research with individuals with visible differences about their romantic relationships, but has not previously

conducted research with military populations. Throughout the research process, the authors continued their reflections in order to manage the influence of pre-conceptions and personal positioning on the rigor of the research. During the analysis the authors returned to the transcripts re-examining them to ensure themes and connections came from the participants' responses and reflected on the double hermeneutic and interpretative process.

Recruitment and selection

Aligned with IPA and it's idiographic commitment [26,27], a small purposive sample was recruited using opportunity sampling. The authors aimed to recruit approximately six to eight participants meeting the eligibility criteria of being a male veteran of the British Armed Forces, injured during operational deployment (combat) in Iraq or Afghanistan, whose injury permanently changed their physical appearance. A three-pronged recruitment approach was used.

- Twenty participants from a previous military study conducted by one of the authors, who had consented to being contacted about further research, were invited by telephone/ email to take part.
- 2. Study advertisements placed on social media by the research team.
- 3. Two veteran support charities shared the study advertisement with potential participants.

Seven potential participants (six from the previous study; one from a veteran support charity) responded and were given the study information, subsequently providing informed consent to participate. One participant later withdrew stating they had reconsidered their participation as they did not feel comfortable talking about their relationships and so preferred not to be interviewed.

Once six interviews were conducted data collection ended. However; two interviews were excluded from the final sample. One was excluded since during their interview it transpired that their injury had not been sustained during operational deployment, but during training and had elected to have their lower leg amputated following several years of unsuccessful recovery from the original ankle injury. This participant did not meet the study inclusion criteria of sustaining their injury during operational deployment. The decision to exclude the second interview was arrived at following consideration of the content of the interview and its inadequacy of containing relevant data to address the research question. During the interview, the participant focused mostly on the practical impact of their injuries such as the impact on their career and the process of their medical discharge. Prompts made by the interviewer to the participant to share more of their experiences related to their relationship including those that were positive, were unsuccessful, with the participant favouring sharing the practical impact. The participants' preference to divert from questions regarding their relationships may reflect the practical post-injury experiences being of greater significance to them and/or they did not feel comfortable discussing their relationship. There is not however, enough data to draw a conclusion on either possibility. The exclusion of interviews due to a lack of depth necessary for IPA has been reported in other published research [28].

Participants

The final sample consisted of four white, heterosexual men, aged between 33 and 42 years, who had been physically injured by an improvised explosive device (IED) during combat in Afghanistan between 2008 and 2011. Table 1 provides a biographical sketch of the four participants including their pseudonyms).

Two participants served in the British Army, one in the Royal Air Force and one in the Royal Marines. One was of 'non-commissioned officer' rank and three were of 'other (non-officer) ranks' at the time of injury. All participants were in romantic relationships at the time of injury and interview, two were in the same relationship at injury and interview and two participants were in different relationships at the time of the interview as their previous relationships had ended soon after their injury. Two of the participants had lost lower limbs and two had seriously broken limbs resulting in significant physical scarring and reduced mobility.

Data collection

A semi-structured interview guide was developed in accordance with the recommendations of Smith et al. [25]. Open-ended questions encouraged participants to talk openly about their experiences and prompts were included to guide the interviewer if the participants required clarification, to draw the interview back if it became tangential, and to encourage depth of response. The schedule covered four broad areas [1]; experiences of injury and changed appearance [2]; romantic relationships, particularly in the context of their changed appearance [3]; intimacy and sexual experiences; and [4], experiences of emotional and relationship support post-injury. Prior to the study interviews, a pilot interview was conducted with a veteran injured in the 1990s in Northern Ireland. The pilot interview resulted in no significant changes to the schedule and the pilot participant sharing that they felt the questions were accessible and acceptable. The semi-structured guide was applied flexibly prioritising the accounts of the participants while retaining the broad focus of the study. Interviews lasted 60-78 min, were audio recorded and transcribed verbatim by a third-party professional transcription service.

Table 1. Participant injury and relationship information.

Participant pseudonym	Injuries sustained and change to appearance	Relationship status at injury	Relationship status at interview	
Daryl	Lower legs broken resulting in physical scarring to both legs below the knee	Long term relationship ended	Married	
John	Right leg above knee amputation	Long term relationship continued	Married	
	Left leg scarring			
	Right arm scarring			
	Left hand missing digits			
Dave	Left leg below knee amputation	Long term relationship ended	Engaged	
	Scarring on face, head and torso			
Lewis	Right foot and ankle scarring	Long term relationship continued	Married	
	Left arm scarring			

Analysis

An inductive data driven approach to data analysis was taken, with no underlying theory driving the analysis. In accordance with IPA's idiographic commitment and the guidance of Smith et al. [27] each transcript was analysed in turn by the first author, before moving to a group analysis. This started by familiarisation with the transcript and emersion in the data before engaging in initial noting including notes of a descriptive, linguistic and conceptual level. The initial noting led to an examination of how the notes overlapped and naturally grouped together to form initial themes. Initial themes were discussed with the second author reflecting on content, interpretation, structure and importance. Consideration of connections between each theme such as how they illuminate and fit together, or contradict and contrast, led to the generation of agreed upon themes and sub-themes. Once this process was conducted for each of the transcripts the first author moved to looking for patterns across the group. Convergence and divergence of the participants' experiences as reflected in their respective themes was examined leading to the four participants' themes being combined and collapsed to generate the master superordinate themes and sub-themes. The second author considered this analysis, interpretation, and the thematic structure before discussing them together to reach agreement on the final superordinate and sub-themes.

Results

IPA of semi-structured interviews with four male UK military veterans with appearance-altering combat-injuries identified three superordinate themes: (Loss of) The super soldier; New states of vulnerability; and Injury tests the foundations of relationships (table 2).

These superordinate themes, along with the sub-themes, represent how the participants made sense of their injury and changed appearance in the context of their romantic relationships. The significance of appearance and diminished masculinity, and experiences of relationship discord and difficulty, varied across the veterans, representing a spectrum between relationship turbulence to security, strength and growth.

(Loss of) the super solider

This theme represents three of the veterans' experiences of the intrinsic masculinity of their military identity and their military body, and the centrality of that to their self-concept. When subject to appearance-altering physical injury, the three most severely injured veterans' sense of masculinity and military identity was impacted, as one participant Daryl stated

... that super solider, something you see in movies... great big marine, six-pack, great big muscles, and now that energy's take away.

Tab	ole 1	2. 5	Superordii	nate th	nemes	and	sub-t	hemes
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Superordinate themes	Sub-themes			
(Loss of) The super soldier	Prime ideal military fitness			
	Loss of masculinity			
	Establishing new masculinity			
New states of vulnerability	Appearance pressures and expectations			
	Sex, intimacy, and fertility			
	Dating and disclosure			
Injury tests the foundation	The ultimate test "It can probably go one			
of relationships	of two ways"			
	Revealing the foundations of relationship			
	investment and commitment			
	Working together or apart			

As shown in the later themes, the diminished sense of masculinity, experienced both due to their changed appearance and physical ability, impacted their relationships. Lewis, the least severely injured, represents a divergent case whereby he did not share any explicit or latent experiences connecting his injury to masculinity. For the three veterans' whose sense of masculinity appeared to feel threatened and/or diminished, they seemed to have found new ways of re-establishing their masculinity, which benefited their identity, self-esteem, and in turn their romantic relationships. This theme includes three subthemes; Prime ideal military fitness (physique), Loss of masculinity; and, Establishing new masculinity.

Prime ideal military fitness (physique)

For Daryl, John, and Dave, their military experiences were characterised by an expectation to look a certain way. Being a soldier meant being at peak physical fitness, signified by a muscular, strong, and powerful, masculine body. They perceived having this military physique, both in physical ability and appearance, as a non-negotiable requirement, necessary to fulfil their military role. Not conforming to the masculine body ideal could lead to them being perceived as unfit for their military role and at risk of ridicule from peers.

... oh God, I was like 17 stone, ripped and sort of peak physical condition of a, of an infant'eer. Um, you know, gym regularly, um, cardiovasularly fit, muscular, yeah... sort of prime, prime ideal stereotypical military fitness... I mean, apart from the obvious benefits that being in that position poses, uh, there's the banter-ish side where, you know, if you're a bit tubby and not able to run, your mates take the piss out of you a little bit. Um [pause] so, you know, when the shitith hiteth the faneth, as it were, um, you know, you need to be able to protect yourself and your mates and you can't really do that as an infantry if you're, you know a bit large around the midriff and get out of breath at a run [laughs] (Dave, below knee amputation, facial, head and torso scarring).

I was serving with the *regiment (removed for anonymity)* and again, image is important because when you're on parade you have to look really smart. And if you see some overweight guy on a horse you start thinking 'well is that really best of British?' So you've got to uh, bring yourself across really well and you have to look after yourself. (Daryl, broken legs resulting in physical scarring).

Loss of masculinity

Following their injuries, Daryl, John, and Dave, experienced a loss of their military body and with it, part of their military identity and masculinity. Their injuries changed their physique and appearance due to limb-loss, physical scarring, and mobility restrictions affecting their ability to maintain their previous strength and fitness. This seemed to decrease body confidence and lower self-esteem. In contrast, Lewis was less affected, perceiving his injuries as comparatively less severe in physical and aesthetic consequences.

... when you're not, literally [laughs], not the person you used to be. Um, and, and things are a lot harder... to keep in that physical shape... and then not being in the military to have that as a, as a boost to keep yourself in that, you know, it's quite a difficult thing (Dave, below knee amputation, facial, head and torso scarring).

... my injury, certainly compared to others is of, say, relatively um [pause] uh [pause] was, yeah, I'd say, more minor than others ... I haven't got scarring on my face or, you know, I'm not missing limbs, or fingers or something that is very obvious ... it hasn't really had an effect on my appearance (Lewis, foot, ankle, and arm scarring).

With the dissolution of Daryl and Dave's romantic relationships following their injuries, they arguably lost additional masculinity. Daryl interpreted his relationship ending as a direct consequence of him no longer being the 'super soldier'. John and Lewis' romantic relationships continued post-injury, seemingly buffering against any related diminished masculinity or self-worth, in comparison to the experiences of Daryl and Dave.

... being told by the girlfriend 'Oh we need a break' because all of a sudden, you're not just a super fit soldier anymore you're just someone with broken legs." (Daryl, broken legs resulting in physical scarring)

Because of their injuries, all four veterans were medically discharged ending their military career. In comparison to Lewis who created a new meaningful career, the others faced difficulties finding meaningful post-injury/post-service careers, which although not directly related to their appearance, compounded feelings of diminished masculinity, affecting their sense of self and in turn their relationships.

All the feedback you get from the guys is that your career is over at, it will be ... and it's like 'OK so then who ... am I going to be? What am I going to be? I just don't know' ... (Daryl, broken legs resulting in physical scarring).

Because that's my, I've got my own *business* [name removed for anonymity] now so the cycling theme is going, without [pause] again, cutting a long story short ... not only just using cycling as rehab but it then became, as I say, my career. (Lewis, foot, ankle, and arm scarring)

Establishing new masculinity

All of the participants engaged in practical, cognitive and/or emotional activities which acted to establish a new sense of masculinity through re-building confidence and self-worth, avoiding feelings of weakness, and reasserting a sense of strength; in turn positively affecting their relationships. Practically, for those able to and often in adapted ways, this included going to the gym to maintain an 'acceptable' level of fitness and an 'acceptable' physique, (e.g., negotiated forms of fitness and physique expectations), engaging in competitive sport, and investing in attempts to build a new career, especially in traditionally masculine occupations.

...so people can probably tell that I have got, got something wrong with my leg but I still kind of look like I train. You know what I mean, like? I look like I go to the gym (John, above knee amputation, leg scarring, arm scarring and missing digits).

I enjoyed my adventure training so I'm a yacht master, dive master, and then realizing those sort of careers don't really pay a lot of money. Then I went down the flying route, so I'm commercial helicopter pilot and I've got my fixed wing license which I managed to get when I was in a wheel chair. (Daryl, broken legs resulting in physical scarring)

Cognitively, new forms of masculinity were established by reassessing values that no longer served them and had previously negatively impacted their romantic relationships such as internalising masculine body ideals, bottling up emotion, and valuing ableism. Reassessing and decentralising these masculine values benefitted their relationships and their self-worth.

I think we're (relationship with partner) better now than what we have been ... we've um [pause] made some changes and stuff, well mainly me, to be fair. Um [pause] so I think we communicate a lot better now. I used to kind of bottle things up and [pause] um, not really communicate well and just kind of do my own thing, where now, you know, I express myself a lot more, um [pause] again, that stops, stops the arguments and stops us from going [pause] you know, in a bad place again. (John, above knee amputation, leg scarring, arm scarring and missing digits)

Emotionally, all of the veterans spoke of the value and importance of peer support from other injured veterans who were able to empathise and access shared experiential and cultural understandings. Arguably through veteran peer support they were able to retain one aspect of their military identity and associated masculinity.

Well we were just kind of giving each other support, you know everybody was in the same boat of not knowing what the future was bringing. (Daryl, broken legs resulting in physical scarring)

Um, so I think, you know, we were, as a collective group of injured soldiers, you know, we all talked and stuff so we, we were, all tried to keep a look out for each other, if that makes sense? (Dave, below knee amputation, facial, head and torso scarring)

New states of vulnerability

Their injuries and changes to their appearance created new vulnerabilities connected to body image, diminished masculinity and their relationships. These encompassed concerns about their physique and attractiveness, sexual function, and fertility. While these vulnerabilities were only externally revealed to those closest to them, internally the veterans were [1] conscious of meeting appearance expectations [2] facing difficulties with sex and intimacy, and [3] those who were seeking new relationships post-injury faced novel dating experiences and difficulties. These challenges form the three sub-themes within this theme.

Appearance pressures and expectations

All of the veterans spoke of feeling self-conscious about no longer meeting societally based appearance ideals and expectations. The impact of societal appearance norms and expectations ranged in intensity and included fears of being negatively evaluated by others, concerns that they would be perceived as weak if others saw their prosthetics, and insecurities that romantic partners (potential, new or existing) might find them unattractive. Though conversely, despite their appearance related insecurities, but consistent with masculine ideals and the rejection of vanity, most of the veterans overtly dismissed the personal importance of appearance. For some, feelings of self-consciousness led to efforts to conceal their prosthetics and scars to maintain a sense of strength and to hide aspects of their appearance they were uncomfortable with. Among the veterans who concealed, tensions in relationships loomed as romantic partners found their concealing behaviours frustrating.

Um [pause], obviously, I will have doubts anyway because, obviously, you know I'm the one, kind of, with one leg and all these scars and stuff so, I think you do have doubts and even, even still now, you know... I still have doubts in the back of my mind, you know? You kind of think am I attractive or is she here just because, you know, because we've been together so long and got kids and stuff (John, above knee amputation, leg scarring, arm scarring and missing digits)

She gets really frustrated with me now because it's sort of a broken record. She used to be sympathetic and say 'OK it if makes you feel better then cover up' and then now just gets to the stage where it's like 'it's hot outside, you need to be cool, put some shorts on just make sure you put sunscreen on the scar tissue, you'll be OK let's go out and enjoy a day out'. (Daryl, broken legs resulting in physical scarring)

Sex, intimacy and fertility

Daryl, John and Dave, expressed insecurities related to sex and intimacy which were both directly related to how they felt about their appearance and to the need to adjust to changes in how their bodies now functioned. For all three participants' these concerns and adaptations brought feelings of vulnerability and to some extent a threat to their sense of masculinity. For example, revealing their 'new' bodies to romantic partners created feelings of self-consciousness which could potentially distract or hinder sexual activity.

Uh well, there was a whole stage of like 'OK I'm now stripped off and I'm lying on a bed and uh [pause] I just turned the lights down just a little bit. Again, there's that seed in the back of your mind and yeah you try and ignore that and enjoy the moment (Daryl, broken legs resulting in physical scarring)

Due to bodily changes, such as lower limb-loss or reduced use of their legs, they had to learn to adapt how they engaged in sexual activities, such as finding new sexual positions. With a focus on sexual intercourse and attempting to meet partners' needs, adapting how they had sex was reported as challenging and hard work. Difficulties with erectile function were reported by some participants, often creating feelings of anxiety that affected performance and enjoyment. Specifically, for Dave, not being able to consistently meet his partners' sexual needs since he relied on medication to aid erectile function, compounded by concerns about the uncertainty of his fertility, created conflict in Dave's relationship with his partner. Performance and fertility concerns appeared to create feelings of frustration and disappointment and affect his sense of self-worth.

I'm on medication for erectile dysfunction and have literally like, zero [sex] drive, and that's something I'd say that I can sometimes struggle with ... and you know concerns for the future ... we want to have kids and it's whether or not I'm going to be able to do that ... and that can play, um [pause] not, not, it's not an issue but I'd say that a lot of our disagreements and arguments sort of stem from that. You know, she wants it [sex] and I'm physically unable to. That's [pause] that's a pretty big blow and that can be a catch-22 cycle of, you know [pause] of wanting to, not being able to, bit sad, which then adds to not being able to and things like that. It's quite a hard cycle to break (Dave, below knee amputation, facial, head and torso scarring).

Dating and disclosure

Following the dissolution of Daryl and Dave's relationships, they began to seek new relationships, revealing novel challenges and vulnerabilities. The risk of rejection was perceived as high and included considerations of when to disclosure their visible difference. Concerns about meeting women who were motivated to date them due to the assumption that they would have compensation money was frequently reported, not only among Daryl and Dave, but raised by all participants.

I had a few where I've met people you know... and you pop it in the conversation and it's like an automatic thing where you could be getting on and then it's like 'oh! Oh ok' and you can just see the situation just turns one-eighty and interest just goes... There were several, several incidents like that. (Dave, below knee amputation, facial, head and torso scarring)

Well it did go into my mind seeing other guys getting uh quite large pay outs from the military for losing limbs. I still have mine and there was a lot of scarring so [pause] did start thinking well, was she just around to try and get some money (Daryl broken legs resulting in physical scarring)

Both Daryl and Dave reported ways they had mitigated these dating risks including: disclosing their visible difference early; peer support regarding potential 'gold diggers'; hiding their financial situation early in the relationship; and, dating women who showed some assurance that they were accepting of visible difference and disability, such as being set up on dates by friends and dating people who were 'desensitised' to disability and visible differences through their profession.

 \ldots because I found, you know, if you wait until the second or third date it's even worse because you can really get on and make a

connection with someone and then drop it in and they're 'oh, why didn't you tell me sooner?'... if you start getting a connection you've just got to throw it in otherwise you waste your time, you waste their time and [pause] it hurts, so ... (Dave, below knee amputation, facial, head and torso scarring)

Then when I went on to rehabilitation, that's where I met wife [name] because she was working there and it's uh again, she was sort of desensitized to everything anyway (Daryl, broken legs resulting in physical scarring)

Injury tests the foundations of relationships

For all the veterans, their injury created an ultimate test of their relationship in the face of life-changing traumatic injuries. The four veterans' experiences represent a spectrum of relationships from those based on weaker material foundations that could not overcome adversity and ultimately ended post-injury, to those based on committed foundations that were strengthened and continued post-injury. Three sub-themes demonstrate [1] how their injuries tested the relationship [2], revealed the foundations of relationship investment and commitment, and [3] how working together as a team created strength and stability.

The ultimate test "it can probably go one of two ways"

The physical impact of the veterans injures created short-term uncertainties about how long they would be in hospital and the unknown length of rehabilitation. In the long-term, their injuries created a permanent change to their appearance, the loss of their military career, decreased mobility and physical restrictions, and uncertainty of the long-term impact on health. The divergent experiences of the participants in terms of Daryl and Dave whose relationships ended, John's which experienced turbulence but continued and eventually grew stronger, and Lewis' which grew stronger, highlights how combat-injuries can test relationship stability and strength. For Daryl and Dave, their girlfriends at the time of the injury, showed that the impact on their lives outweighed the commitment to the relationship. For John and his partner, the commitment of their relationship, including having a child together, meant the desire to face the challenges was stronger than to end the relationship, although this came with insecurities and difficulties to overcome. In contrast Lewis' relationship not only continued, but grew stronger; though of note in comparison to the other veterans, his injuries had the least impact on appearance and ability.

So, before I was injured, um and had a, a steady girlfriend that I'd known for years. Uhm, she was a friend that turned into a, a romantic partner... we were in contact regularly in Afghanistan... and then, when I got injured my parents notified her and, uh, it was a case of, you know, obviously, I was smashed up in a, in a bed space in [hospital] and, uh, she was all like, oh you know, 'how am I going to cope with this?'.... so that didn't last very long (Dave, below knee amputation, facial, head and torso scarring)

You definitely think about whether the girl might not want to stay around and stuff like that. Um [pause] but, again, I think because she'd come down there [the hospital] and stuff, and brought my little girl down, and she was staying with my mum and dad at the time, I didn't really get any inkling that she was going to get up and leave... it definitely did go between my head a little bit, it has to you know [pause] she's not going to want to stay with someone who's got one leg and stuff like that ... (John, above knee amputation, leg scarring, arm scarring and missing digits)

... traumatic events like that can, can probably go one of two ways you know whether that, um, has a negative impact or a positive impact on your relationship so, if anything, it, it made our relationship stronger ... (Lewis, foot, ankle, and arm scarring).

Revealing the foundations of relationship investment and commitment

Through their injuries and the test on the relationship the foundations of their relationships were revealed. For example, Daryl perceived his relationship ended post-injury because he was no longer the 'super soldier' his girlfriend valued so highly, thus revealing her materially orientated investment in their relationship. In Daryl's new relationship, formed post-injury, his concerns with masculine body ideals, money, and career, seemed to create relationship difficulties. Dave perceived his relationship ended postinjury due to his girlfriend being more concerned about the impact on her life rather than on him or 'them' as a couple. Although John's relationship continued, he experienced insecurities due to him valuing ableism and other masculine ideals. Thus, where the foundations of relationships were exposed as including material, masculine based values such as status, appearance, wealth and career, relationships were vulnerable. In contrast, where the foundations were deeply rooted and values included respect, appreciation and investment in each other, the relationship was strong and secure. Although John's internalisation of masculine ideals created relationship turmoil, foundations of mutual respect, understanding and investment between him and his partner meant their relationship was strong enough to withstand the test and grow over time.

... basically I got given my marching orders, it's like, because I'm not good enough anymore. (Daryl, broken legs resulting in physical scarring)

Yeah, it's been a bit um [pause] been a bit of a roller-coaster to be fair. Um [pause] we're still together after, you know, being together for 11 years and stuff, ... it's, it's not always been perfect kind of thing. So we have had our, like, ups and downs, like anyone, um [pause]. We've split up a couple of times and got back together ... But all in all, kind of thing, it's, it's been good. So, we've got three kids, got a house and stuff so [pause], no it's been, it's been good. (John, above knee amputation, leg scarring, arm scarring and missing digits)

Working together or apart

A difference between the relationships that ended and those that continued seemed grounded in whether the couples worked together towards common goals, supporting each other through the challenges, or worked apart, concerned with their own needs and not their needs as a couple. Even in his new relationship, Daryl demonstrated a preference for individuality over mutual interdependency, prioritising establishing a new career and fulfilling the role of being the provider. This created tensions in his relationship. In contrast, John, Dave, and Lewis shared their experiences of how they worked together with their current partners adjusting, investing in each other, and growing together, creating strong bonds and positive relationship experiences.

There is a lot frustration that's uhm, spending time away instead of being, going for meals out or just being romantic, it's all about like 'OK I need to go and do some more exams so I need to study for that and the focus is on that and losing sight of her, even though the sight is to make her comfortable in life (Daryl, broken legs resulting in physical scarring).

So, there's that level of uncertainty but, then again, I think you get stronger together because you, um, you're also working, you're also then working towards a goal so, you know...so, although it's, there's uncertainty, which can be a negative impact, there's lots of positives in that, you know, you're striving towards something together. So, um, that was, that has a big positive impact as well on the relationship. (Lewis, foot, ankle, and arm scarring)

Discussion

Physically injured veterans' experiences of adjusting to their changed appearance and physical bodies and the impact on their

romantic relationships were examined using IPA. This highlighted the salience of the body to military (masculine) identity and how its loss following injury led to vulnerabilities relating to shifts in identity, attractiveness, sexual relationships and functioning, and maintaining existing and forming new relationships. Establishing new masculinity, reassessing the extent of their subscription to normative masculine values, having a relationship built on strong foundations, and engaging in collaborative coping, seemed to benefit the veterans' long-term romantic relationship success and satisfaction, as demonstrated through the contrasting experiences of the four veterans.

(Loss of) the super soldier

The centrality of masculine body ideals to military identity identified in this study is consistent with previous research highlighting links between hegemonic masculinity and the military body [13,16]. In their Foucauldian analysis of the relationship between masculinity, the body, and the military as represented in the film *Jarhead*, Godfrey, Lilley, and Brewis [15], propose that the civilian body becomes incorporated into the military through the practices of training and the production of the 'gendered military body'. They suggest this includes the use of discourses and attitudes to make the military body 'fit for purpose' with deviation from this received with criticism and rejection [15], or in the case of the veterans in this study, 'banter' from their peers.

It is suggested that through acquired disability, masculinity is challenged as able-bodiedness is central to the masculine ideal [17-19]. This is evidenced by the veterans in this study who felt stripped of their masculine body as well as their military career and identity, resulting in decreased confidence, and self-esteem, with negative implications for their relationships. Where relationships ended post-injury, sense of diminished masculinity was exacerbated. Embracing traditionally masculine activities such as going to the gym and engaging in sport however, enabled a performance of "doing" masculinity, which Manderson and Peake [19] in their research with injured sportsman, suggest helps to resist "disability" and assert masculinity, in turn building confidence and renewed identity. Negotiating 'Masculine Capital' [29] enabled the veterans to create a viable masculine identity by using competence in one or more masculine domains to compensate for lack of competence or acquisition of others. However, while performing some forms of masculinity was beneficial for renewed identity and confidence, conformity to traditional masculine norms maybe associated with decreased relationship satisfaction [30], as demonstrated in two of the veterans' experiences in this current study.

Having access to and receiving peer support from other injured veterans enhanced coping with post-injury relationship challenges and vulnerabilities. While engaging in support may seem counter to normative masculinity, the continuation of military values of camaraderie is consistent with the military (masculine) identity. A paradox between hyper masculinity and caring masculinities is embedded in the camaraderie between soldiers and within their normative masculinity [31]. This paradox is part of the values internalised during group assimilation into the military collective, and is only extended to others holding this group membership, thus 'being one of the boys' gives access to this support. This is consistent with evidence indicating that social support is most beneficial when provided by those who share the same social identity [32]. Access to peer support from others with similar injuries and associated relationship difficulties may be a unique positive aspect of recovery and rehabilitation for combatinjured veterans.

New states of vulnerability

Despite re-establishing masculinity in some areas, vulnerabilities in other areas subsisted. Concerns surrounding attractiveness, being negatively evaluated, rejection by others, and insecurities of whether existing partners will still find them attractive, are consistent with experiences reported among civilians with visible differences [5,6]. These concerns reflect conscientiousness of whether their bodies continue to meet masculine as well as broader societal appearance expectations, which when internalised affect their sense of security in existing relationships and confidence in initiating new relationships. Consistent with the masculine rejection of vanity [29] the veterans contradicted their appearance concerns by proclaiming the unimportance of appearance.

Due to concerns of being negatively judged or perceived as weak, some veterans concealed their prosthesis in public. Prosthesis use as a practice to maintain an identity of able-bodiedness is reported among civilian amputees, allowing them to avoid being labelled 'disabled' [33]. Concealing prosthetics may be an additional measure to manage the dilemma of disability and masculinity [18]. For those veterans who were dating, concealing led to the need to disclose, creating additional anxieties around the risk of rejection once their difference and disability was revealed. Consistent with research with civilians [5,6], the veterans reported that being open and honest about their visible difference early in a relationship was beneficial.

Concerns related to new partners being interested in the veterans' compensatory payments and financial worth maybe a vulnerability specifically relevant to injured combat veterans and are consistent with reports made by health professionals who provide post-injury rehabilitation to injured UK veterans [34]. It is notable that peers provided support and information regarding the potential of 'gold diggers', with little indication of any formal acknowledgement or support of this vulnerability. Forming new relationships with women who were 'desensitised' to disability and visible differences, and were either already known or endorsed by a close friend, seemed to provide additional safety, minimising the fear of rejection and guarded against the possibility of dating someone motivated by financial gain.

Much like the experiences of US combat veterans [35], the veterans in this study experienced difficulties with sexual activity and fertility which created tensions and challenges in their relationships. Consistent with the experiences of men with spinal cord injury [36], the veterans in this study with erectile dysfunction felt let down by their bodies. Perceptions of the ability to sexually please may affect injured veterans' role identification and wellbeing [20]. Much like (hetero)sexual experience and accomplishment [16,31], sexual performance and fertility may be considered important components of the veterans' masculinity. Despite this, the veterans in the current study reported unanimously that little support regarding sex, intimacy, and fertility, from a psychological perspective, had been provided. Notable in these veterans' experiences is evidence of narrowed sexual repertoires, with a focus on erectile function and performance [36]. These veterans may have benefitted from support to help them develop new sexual repertoires including knowledge of what positions are safe and possible [36]. As Ellis et al. [21] found in their case studies of veterans using a sexuality and intimacy program in the US, shifting focus from a performance-based model of sexual activities, with an

emphasis on penetration, to a pleasure-based model, with a focus on erogenous zones and broadening ways of engaging in sexual activity, can be beneficial for sexual and overall relationship satisfaction.

Injury tests the foundations of relationships

The veterans' divergent experiences indicate that appearancealtering combat injuries may test the strength and stability of romantic relationships. To understand why some relationships end while others prosper, the investment model of relationship commitment [37,38] stipulates that relationship commitment is based on weighing up a) the amount of satisfaction derived from the relationship, b) the quality of possible alternatives (e.g., being single or an alternate partner), and c) the level of investment made in the relationship which may be past or planned and tangible or intangible [39]. When satisfaction is based on attractiveness and status which are lost following injury, or when satisfaction decreases due to the perceived burden of injuries, relationship commitment is questioned.

Consistent with previous research with couples where one partner had a serious illness [40], the results of the current study also highlight the benefit to relationships when couples work together to overcome adversity and challenges. When adversities are appraised as 'our problem' and common/collaborative dyadic coping approaches are used, including working towards common goals, couples experience positive outcomes including relationship satisfaction, stability, and better individual and relational functioning [40]. Moreover, when couples provide what Feeney and Collins [41] coined as 'source of strength (SOS) support' the individual facing adversity can thrive and experience growth. Thus, the couples who worked together, seeing challenges as 'their problem' and provided mutual support, experienced more positive outcomes in their relationship and more generally, including career and overall wellbeing.

Implications

The experiences of the participants exemplify the centrality of masculine norms within military identity, especially as represented by the body. The loss of the military (masculine) body following appearance-altering combat-injuries may affect identity, self-esteem, confidence, perceived attractiveness, and romantic relationships. While some of these experiences seem unique to the military context, others are reflective of broader, though potentially intensified, societal appearance and masculine norms. Crucially, understanding these experiences more fully may help facilitate more effective support and rehabilitation from the consequences of appearance-altering combat injuries and the potential strain on romantic relationships.

This research highlights the value of the investment model of relationship commitment for understanding why some relationships may end while others proposer following injury. Further research could aim to confirm these findings in a larger sample, including examining the application and components of that model to understanding the experiences of injured veterans. Future research could also expand on these findings to specifically investigate the role of dyadic coping in divergent stability and quality of post-injury relationships.

It is critical to acknowledge that relationship dissolution is not always a negative experience, for some the end of a relationship can be positive. This research indicates that newly single combatveterans with a visible difference may however, face novel challenges forming new relationships. Interventions aimed at supporting combat-injured veterans whose relationships end might include guidance and support for how to manage the possible challenges such as the initiation of new relationships, the potential financial and emotional threat presented by potential partners who may be motivated to date them for their compensation, and advice on disclosure of their visible difference.

Developing and making available tailored relationship support for injured veterans across the various stages of rehabilitation might be enhanced by considering the nuanced experiences of the veterans reported here. This might include: consideration of the loss of the military (masculine) body and the effect on selfesteem, sense of self, and masculine capital; insecurities related to attractiveness, sexual activities, and concealing their visible difference; concerns about fertility and sexual functioning and developing new sexual repertoires; and the benefit and preference of peer support. The dismissal of the importance of appearance warrants further exploration especially how it may compound the effectiveness of support and rehabilitation.

Strengths and limitations

This research makes a novel contribution to knowledge about the experiences of combat-injured veterans in terms of their changed appearance and the impact on their romantic relationships. While IPA favours small sample sizes, the inclusion of just four participants limits the amount to which these results can speak to the experiences of the veteran population at large. Instead this study creates an important starting point from which future research can expand based on the acknowledgement and addressing this study's limitations.

The idiographic nature of IPA means this research focused on the experiences of UK, male, heterosexual, military veterans injured during combat in Afghanistan. Veterans of other countries, ethnicities, ages, sexualities and genders may have differing experiences due to differences in the role and relevance of appearance ideals, relationship norms, and the cultural and social currency attached to physique and physical functionality. Veterans of other countries, ethnicities, ages, sexualities, and genders therefore warrant investigation in future research. In addition, this research only included those who sustained their injuries during operational deployments. Future research should be inclusive of all veterans who sustained appearance-altering injuries regardless of context, and aim to investigate potential differences in experience. This research also only focused on the experiences of the injured veteran, not their partner and did not address the state of the participants' relationships prior to injury. Future research should aim to include the partners' perspective to expand and triangulate these findings, as well as including questions which allow insights in to pre-injury relationship quality and functioning.

As evidenced by the participant who withdrew and the participant who was excluded, the experiences shared in this study may reflect the experiences of veterans who feel comfortable talking about their relationships, appearance, and their injury. Whilst it was hoped that conducting telephone interviews would provide a safe space for participants to share experiences of personal and sensitive topics, employing a broader range of methods that could facilitate additional anonymity should be considered.All interviews were conducted by a male interviewer; evidence indicates that participants may have responded differently to a female interviewer [42].

Conclusion

To date, limited research has examined the romantic relationships of physically injured military combat veterans with a visible difference. These findings provide emerging evidence that the romantic relationships of physically injured veterans are vulnerable to dissolution and challenges. The loss of military (masculine) identity and diminished self-esteem and confidence, compounded by insecurities related to their changed appearance, appear to have the potential to affect existing, and new, romantic relationships. The divergent experiences of the veterans in this study indicate mechanisms associated with relationship difficulties and dissolution but also mechanisms that create relationship strength and resilience. The need for tailored interventions aimed at supporting veterans to navigate and optimise their romantic relationships following appearance-altering combat-injuries warrants further investigation.

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ORCID

Mary Keeling D http://orcid.org/0000-0002-3049-6022 Nicholas David Sharratt D http://orcid.org/0000-0002-9215-0457

Data availability statement

Due to the nature of this research, participants of this study did not agree for their data to be shared publicly, so supporting data is not available.

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