STAYING CONNECTED AND NAVIGATING THE PANDEMIC: A MIXED METHODS STUDY INTO THE IMPACT OF COVID-19 ON UK VETERANS

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PORTFOLIO ABSTRACT

Background: The 2019 coronavirus pandemic has posed a challenge to society to cope with an unprecedented threat. Veterans with pre-existing mental health conditions, such as PTSD, may be susceptible to further re-traumatisation due to COVID-19 restrictions and increased anxiety and depression. Bonding and a sense of connectedness with others are seen as basic psychological needs for maintaining wellbeing. Decreased social connectedness can play a significant role in creating barriers to coping and worsening psychological problems. As the pandemic progresses, the current UK restrictions may challenge veterans' ability to function, and their abilities to cope, stay connected and adapt.

Aims: This thesis had three primary aims: (1) to investigate the relationship between coping, depression, anxiety, traumatic stress, coronavirus anxiety, and social connectedness following COVID restrictions using a cross-sectional survey, (2) to use the results from the survey to inform qualitative data collection and recruitment to interviews, and (3) to gain an experiential understanding of the impact that COVID restrictions may have had from the veteran perspective.

Method: A two-phase sequential explanatory design was used and involved two phases: (1) a cross-sectional survey exploring social connectedness, anxiety, depression, traumatic stress, coronavirus anxiety, and coping amongst UK veterans from all branches of the military (n=130). Participants were selected for interview from phase one using a 'participant selection model', and overall sample data informed the development of the interview schedule (2) a qualitative exploration of the impact of the pandemic on a sub-sample of the population (n=11) using semi-structured interviews, with transcripts being analysed using reflective thematic analysis. Participants were primarily recruited through social media and veteran charities. Maximum variation sampling was used to select participants for interviews.

Results: Phase 1: Spearman's rank correlations demonstrated a negative association between traumatic stress and social connectedness (rs=-.71, p=<.001), and dysfunctional coping strategies (rs =-.60, p=<.001). Strong correlations between depression, anxiety and social connectedness were found, supporting previous literature within veteran populations. Qualitative responses were analysed using thematic analysis and produced three themes:

Living through the pandemic, *connecting with others*, and *changes to psychological state.* These findings then led to the development of an interview schedule used with participants.

Phase 2: From interviews, five synthesised core themes were identified: *the need for social connection, adapting is key, managing and overcoming mental health barriers, the military made me, and progression of the pandemic*. Veterans appear to move through stages as the pandemic progresses. These stages present new challenges that need to be overcome to achieve a sense of wellbeing as restrictions continue. The theme *military mentality* was evident across all participants; suggesting that a military identity plays a role within the ongoing pandemic restrictions.

Discussion: These findings provide insight into the impact of lockdown restrictions upon social connectedness, adapting and mental health. Social connectedness was highlighted as an important aspect of everyday living for participants and restrictions impacted upon this, leading to the need to adapt their context. Military identity is also seen as important during the pandemic as a mechanism that can mobilise individuals to make changes in their life moving forward.

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Firstly, I'd like to thank both of my research supervisors, Thomas Schroder and Rachel Sabin-Farrell for their patience, guidance, and support throughout this whole project. The pandemic has proven to be a far more challenging time for me than I would have thought and at multiple points of the project I have felt like giving up. But with their support, I have managed to finish, what is in my mind, one of my best pieces of work.

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STATEMENT OF CONTRIBUTIONS

Project design

The project was designed by Dan Brooks and refined following discussions with university course staff and supervision meetings with my research supervisors (Thomas Schroder and Rachel Sabin-Farrell)

Applying for ethical approval:

Ethical approval was applied for by Dan Brooks following consultation with Thomas Schroder and Rachel Sabin-Farrell. Following the collection of phase 1 data, a revised interview schedule was checked with supervisors and sent to ethics as an amendment.

Writing the review of literature:

This was written by Dan Brooks in collaboration with feedback from both research supervisors (Thomas Schroder and Rachel Sabin-Farrell)

Recruiting participants:

Participants for phase 1 were recruited through sharing of the online survey by Dan Brooks, my research supervisors, and our friends, family and colleagues (via snowball sampling). Participants in phase 2 were recruited from phase 1 and this was done by me.

Data collection:

Data from the online survey was collected and scored by Dan Brooks.

Entering data:

Data were cleaned and entered into SPSS by Dan Brooks. Qualitative responses from the survey were imported into Nvivo**.**

Data analysis:

Phase 1 data analysis was conducted by Dan Brooks under the supervision of Thomas Schroder. Qualitative responses were analysed by me and shared and discussed with both research supervisors (Thomas Schroder and Rachel Sabin-Farrell). Phase 2 data was transcribed using the *Nottingham Transcription Service* and imported into Nvivo. Interview transcripts were analysed by Dan Brooks, with discussions with research supervisors (Thomas Schroder and Rachel Sabin-Farrell).

Write-up:

The project was written up by Dan Brooks and was shared with both supervisors (Thomas Schroder and Rachel Sabin-Farrell) who provided feedback and comments.

Systematic Review:

The review was carried out by Dan Brooks with support from both supervisors (Thomas Schroder and Rachel Sabin-Farrell). Amendments were made following feedback from Nima Moghaddem and Dave Dawson

Small-scale Research:

The project was designed by Dan Brooks and Amanda Tetley. The author carried out the research including the write up with support from both supervisors (Thomas Schroder and Rachel Sabin-Farrell). Amendments were made following feedback from Nima Moghaddem and Dave Dawson

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SYSTEMATIC LITERATURE REVIEW

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Military Veterans and the Role of Social Connectedness for Reintegration to Civilian Life: A Systematic Review

Highlights

- Meta-synthesis of studies of social connectedness and veteran reintegration
- Results demonstrated three themes: 'Establishing connections, Preparing for change, and Reuniting with previous networks'
- Both leaving behind military groups and integrating into new groups are seen as significant barriers to overcome
- Implications for providing military personnel with more support with the reintegration process

Abstract

Background and Aim: Reintegrating back into the community when leaving the army is a process that can present difficulties to veterans. Social inclusion and belonging to social groups have all been suggested as contributing towards positive reintegration. However, how these social processes allow veterans to 'connect' to others within the community is relatively unknown. This review aimed to identify, appraise and synthesise the existing literature, to establish what role, if any, social connectedness has on veteran reintegration.

Method: A systematic search of the literature was conducted. Following identification and screening, four qualitative and two mixed methods studies were included in the synthesis. An appraisal tool was used to assess the quality of the studies. A meta-ethnographic approach was used to synthesise the data.

Results: The synthesis suggested three key themes: Establishing connections, preparing for change, and reuniting with previous networks. Veterans experienced difficulties leaving previous social bonds behind as well as forming new bonds with civilians. Similarly, returning to family and friends was a significant challenge particularly around feeling understood and supported.

Conclusions: Social connections are an important aspect of the reintegration process and should be considered both before military discharge, as well as during the reintegration process back into the community.

Key Words: Veterans, Social Connectedness, Reintegration, Bonding

Introduction

Integrating into the community after leaving the army is a process that can significantly affect veteran populations. Individuals can present with a range of problematic and complex needs that can affect their ability to readjust post-deployment, including PTSD and mental health difficulties (Hotopf et al., 2006). As a term, post-deployment refers to the stage by which military personnel have completed an extended period of duty away from home. Individuals can experience multiple deployment periods whilst remaining active members of the military. In contrast, reintegration as a stand-alone term involves the process of returning to the community after discharge or retirement from the armed forces (Resnik et al., 2012). Reintegration can be seen as both a process veterans experience as they return to the community, as well as a marker of their military service ending (Currie, Day, & Kelloway, 2011). The difficulties experienced by combat veterans post-deployment (depression, PTSD; Pittman et al., 2012) are perhaps also likely to occur in those reintegrating into the community, due to the changes in social and interpersonal factors (including social functioning, and challenges with relationships; Elnitsky, Fisher, & Blevins, 2017). Military research has suggested that groups who collectively experience significant or potentially traumatic life events are more likely to form more cohesive bonds (Whitehouse, 2012). Therefore, social support networks are likely to play a key role in veterans returning to civilian life following combat roles. Attachments and bonds created during military service are key components for wellbeing and emotional regulation, with comrades promoting a sense of inclusion and social cohesion (Zakin, Solomon, & Neria, 2003; Boermans et al, 2014). This appears distinct within a military context, as working relationships and a sense of social inclusion are formed within an environment that is structured, regimented and potentially life-threatening (Caddick, Smith, & Phoenix, 2015).

Navigating the social world and creating a sense of 'social connectedness' is seen as key when considering barriers to reintegration into civilian life such as PTSD, mental health and personal wellbeing (Tsai et al., 2016). Not only should veterans be encouraged to maintain social ties with military colleagues, but also be supported to reconnect and find a 'new normal' within society (Ahern et al., 2015). Gaining this support and understanding from families appears to have a greater impact on veteran wellbeing during reintegration; particularly when efforts are taken to gain the perspective of their experience and perceived difficulties returning from combat (Fischer et al., 2015). A veteran study by Sayer et al.

(2011) found that almost 50% of combat veterans surveyed disclosed difficulties not only with 'sharing thoughts and feelings with others but also 'belonging to society again'; suggesting that social networks play a pivotal role in reducing the challenges faced during community reintegration.

Social connectedness is defined as a 'subjective psychological bond that people feel in relation to individuals and groups of others' (Haslam et al, 2015). Whilst connectedness has been studied in numerous ways within research, consensus suggests that belonging or a perceived sense of connectedness with others is a basic psychological need in groups and relationships (Baumeister & Leary, 1995; Fisher, Overholser, Ridley, Braden, & Rosoff, 2015); likely to have a significant impact on mental health factors (Smith, Wang, Vaughn-Coaxum, Di Leone & Vogt, 2016). Social inclusion is also present within the literature when conceptualising social connectedness and its impact on reintegration within society (Cogan, 2015); defining this as 'the interaction between interpersonal relationships and community participation (Simplican, Leader, Kosciulek, & Leahy, 2015). How veterans integrate, can be seen as a societal process, as well as a personal adjustment; suggesting that perceived acceptance or rejection/ostracism can create difficulties leaving the military and establishing new relationships (Wesselmann, Ispas, Olson, Swerdlik, & Caudle, 2018).

A literature review around reintegration challenges in combat veterans (Sayer, Carlson, & Frazier, 2014) highlighted the need for these challenges to be seen as societal, rather than veteran problem focussed. Similarly, a meta-synthesis (Romaniuk & Kidd, 2018) found that loss played a significant role within the context of community reintegration and culture. A range of methodologies are used within the veteran reintegration literature to explore some of these factors; particularly ideas around the social and societal impact of reintegration. Utilising quantitative methods can offer a range of benefits within research for addressing specific research questions, including determining issues of causality (Frankfort-Nachmias & Nachmias, 2007), and minimising subjectivity of judgement (Kealey & Protheroe, 1996). Meta-analysis studies have approached these societal factors by examining and evaluating interventions for symptoms that present within the population (low mood, anxiety; O'Shea, Watkins, & Farrand, 2017) through the use of RCT's. In contrast, qualitative approaches can allow the researcher to be flexible through data collection, analysis and interpretation, but also understand the participant's world through their language and terms; a finding in itself that cannot be captured by numerical data alone (Kirk & Miller, 1986).

The idea of social connectedness and reintegration can be seen as both experiential and measurable. To the author's knowledge, a review has not been carried out on social connectedness within combat veteran populations. This review, therefore, aims to investigate the role of social connectedness on veteran reintegration. Understanding the process and outcome of reintegration within the context of social relationships and connecting with others offers a fresh perspective around ways in which both the positive and negative effects of the reintegration process are perceived. With previous literature focussing on mental health outcomes or framing difficulties within a PTSD context, a social focus would be useful. This is not only for the identification of relevant contributing factors, but also to understand how these social connections are experienced and developed.

Method

Search Strategy

Initial scoping searches were carried out before the final search with the databases to explore the breadth of the literature available and define the search terms. A search within The International Prospective Register of Systematic Review (PROSPERO) was carried out to identify any reviews already completed around the topic.

Table 1.

Search Terms

Veteran inclusive terms	(veteran*) OR (ex-soldier*)
AND	
Reintegration inclusive terms	(reintegrat*) OR (re-integrat*) OR (readjust*) OR (re-adjust*)
AND	
Social connectedness inclusive terms	(social connectedness) OR (social accept*) OR (social connec*) OR (social adjust*) OR (social support) OR (social network*) OR (social relation*) OR (social inclu*) OR (social exclu*) OR (social isolate*) OR (ostrac*) OR (belong*)

Potential studies were identified through electronic databases, free text Google Scholar search and references lists from articles, to minimise the risk of excluding prospective papers (Evans, 2002). The following databases and thesis portals were searched: Web of Science Core Collection, PsychInfo, CINAHL, and ProQuest. Search terms were

identified through previous reviews and subject headings/index terms within the bibliographic databases. The search terms can be found in Table 1.

Inclusion/Exclusion Criteria

Studies were included based on the following criteria:

- Reported on the social aspects of reintegration, as defined under the umbrella term 'social connectedness'.

  The term 'social connectedness' was used to capture the breadth of social experiences involved and allow for reasonable conclusions to be drawn around its role within reintegration. Having previously been used within reviews (Haslam et al, 2015; Hare-Duke, Dening, de Oliveira, Milner , & Slade, 2019), the definition is sufficiently broad as to avoid making too many prior assumptions around the construct as well as restricting the scope of the review to social aspects at the subjective level.

- Participants were veterans who had previously held a combat role before discharge

- The study was published in a peer-reviewed journal or was a submitted thesis/dissertation. Including theses and dissertations within reviews hold several advantages including undergoing a peer review process (if only small) and arguable containing more stringent methodology than peer-reviewed research (McLeod & Weisz, 2004; Hopewell, McDonald, Clarke, &Egger, 2007).

The term 'veteran' is defined independently by national governments, but the scope of these definitions found that common overarching themes around minimum service to be present. The UK defines veterans as: "Anyone who has served for at least one day in Her Majesty's Armed Forces". (Ministry of Defence., 2011). As this definition provided the widest scope regarding minimum service, this was chosen for including papers within the review.

Studies were excluded based on the following:

- The sample had been discharged due to physical injury. This was due to previous reviews already exploring this population (Fritz, Lysack, Luborsky, & Messinger, 2015; Randall, Thomas, Whiting, & McGrath, 2017), as well as the population not being the primary focus of this review.

- Reviews included mixed samples which could not be separated.

There were no time-period restrictions in place and no languages or countries were excluded. Qualitative, quantitative and mixed methodology papers were initially considered for review.

The search results showed that only one quantitative paper satisfied the inclusion criteria. Therefore it was decided that the exclusion criteria would be revised so only qualitative or mixed methods papers (whereby qualitative data could be extracted) would be included. Searches were then re-run and updated exclusion criteria were applied.

Search Outcome

The Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) diagram in Figure 1 outlines the process of article selection (Liberati et al., 2009). Duplicates were removed and then abstracts of the remaining articles were assessed for inclusion.

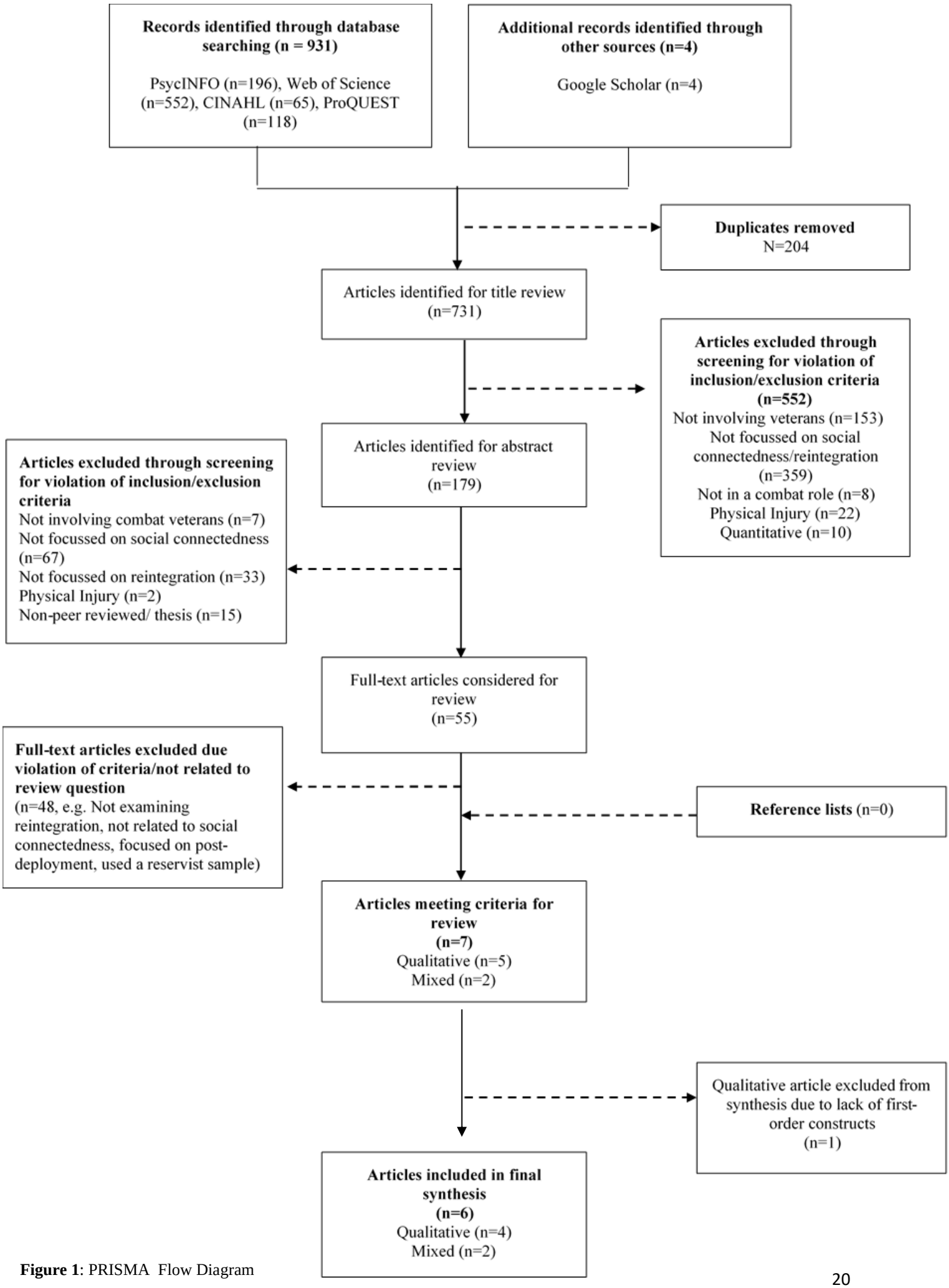

Figure 1: PRISMA Flow Diagram

Following this, 55 full texts were reviewed for eligibility, with 48 of these excluded based upon criteria. The remaining studies comprised five qualitative and two mixed methods. As one of the papers failed to provide first-order constructs, this was excluded, and six studies were included in the final analysis.

Data Extraction and Analysis

This review was approached from a critical realist position; assuming that reality is understood through our perception and that social sciences should be critical of their objects, to fully understand the social phenomena being examined (Easton, 2010; Sayer, 1992). The author is a trainee clinical psychologist with no prior experience of working with veterans but does have an interest in the social implications involved with reintegration. Whilst the author's interpretations may bring about potential bias, understanding veterans and their appraisals of their own experiences can be critically captured through this position.

Data were extracted from the papers (including findings, method of analysis, aims, and data collection). Meta-synthesis is an approach used to analyse data across qualitative studies, intending to select, appraise, summarise and combine evidence found to address specific research questions (Erwin, Brotherson & Summers, 2011). Meta-ethnography; a commonly used approach within meta-synthesis, is one that offers an alternative to meta-analysis. Noblit and Hare (1988) coined the term to involve a process whereby commonalities across studies can be identified through the examination and synthesis of themes. Following this, newly constructed themes can be created to capture the synthesised findings. Meta-ethnography involves three methods of synthesis: Reciprocal Translation Analysis, Refutional synthesis, and Lines of argument. Reciprocal Translation Analysis involves the translation of studies and their concepts into one another; thereby developing overarching metaphors. In contrast, Refutional synthesis involves identifying and exploring contradictions and differences between the studies. Finally, Lines of argument synthesis involves constructing an overall picture from the studies and their relevant parts; producing newly synthesised concepts.

From the data, first and second-order constructs were extracted to later inform newly-synthesised third-order constructs. First-order constructs are seen as original data from studies (i.e. quotes from participants), whilst second-order constructs are the original studies interpretations and themes. Third-order constructs are seen as newly conceptualised themes that are produced from the process of synthesis

Critical Appraisal

There is debate within qualitative research around quality appraisal and the justification of including studies based upon reported quality. Studies of low quality may generate new and interesting insight, and equally those of high quality may offer an incongruent interpretation of findings (Dixon-Woods et al., 2007; Carlsen et al., 2007). Additionally, when research areas are broad and relatively under-researched, all insight into the phenomena can be useful. Therefore it is important to consider if the findings presented by the author hold enough weight to enhance the field of study with which it hopes to enrich (Thomas et al., 2004; Noyes' & Popays, 2007).

The Critical Appraisal Skills Programme (CASP; 2018) tool was used to appraise the quality of included studies. The CASP consists of ten criteria that review the methodological quality of the included papers. As no consistent protocol for evaluating the quality of qualitative research currently exists, it was deemed useful to include all studies with a qualitative aspect, as there is potential for findings to offer significant contributions (Sandelowski, Docherty, & Emden, 1997). Studies were scored against the CASP criteria from zero (not met) to two (definitely met).

Findings

This review initially extracted findings from six studies. A summary of general characteristics can be found in Table 2 (study numbers will be used for reference). Qualitative aspects of the mixed methods studies [2,6] were extracted to contribute towards this.

Six studies were included in the final review; providing a total of 164 participants. All studies but one reported the proportion of men and women recruited [5]; amounting to 129 men and 24 women. All of the studies were conducted within the USA; utilising either interviews or focus groups for data collection. Two of the studies were doctoral submitted theses [3, 4] with the remainder from peer-reviewed journals.

Table 2

General characteristics, aims, methodology and key findings of studies included in the meta-synthesis

Study No.	Study (year), location	Methodology	Study Design	Sample Characteristics	Study Aim	Analysis	Key Findings
1	Demers (2011), USA	Qualitative	Focus groups	Gender: Male (n=45) Female (n=3) Population Service: Afghanistan, Iraq or both	Explore and understand the challenges of veterans reintegrating into civilian life	Inductive Coding	Veterans struggle to reconnect with family and friends; experiencing tension between their yearning to be with people and also feeling misunderstood Identified the need for a common base so that others could understand what they have gone through. Also identified a need for a 'connection'; face-to-face contact with another person who could 'see' them as a person
2	Besterman-Dahan, Chavez & Njoh (2017), USA	Mixed Methods	Survey; Interviews	Survey: Gender: Male (n=32) Female (n=11) Population: Rural veterans Interview: N=11	To assess the effect of a veteran-orientated community agriculture initiative on transitioning rural veterans	Descriptive statistics Unspecified analysis strategy	The experience of working within the community and forming new social connections helped change veterans perceptions of what these social relationships had to offer. Being connected through a common cause allowed veterans to socialise in a meaningful way that mirrored military camaraderie.
3	Briggle (2013), USA	Qualitative	Semi-structured Interviews	Gender: Male (n=15) Female (n=0) Population Service: OEF/OIF	To explore the extent to which social support network affects veterans' reintegration and the perceptions of the challenges faced during reintegration.	Grounded Theory	The most common challenges were reconnecting emotionally with friends and family, difficulty managing strong emotions, missing the military after discharge and negative effects of deployment on daily life. Many of the veterans expressed that they felt difficulty reconnecting with their loved ones when they returned, with some even suggesting feeling completely alienated and disconnected from the support system.

Study No.	Study (year), location	Methodology	Study Design	Sample Characteristics	Study Aim	Analysis	Key Findings
4	Mitchell (2017), USA	Qualitative	Semi-structured Interview	Gender: Male (n=31) Female (n=9) Branch: Army (n=19) Marines (n=10) Navy (n=7) Airforce (n=4) Ages range from 26 to 53	To explore the reintegration of veterans in the context of their military experience and transition from active duty to veteran status to identify components of an optimal reintegration experience.	Thematic Analysis	The findings suggest that veterans who experience the most successful transition have connected to the community providing social support and created new meaning and mission for their lives. The best functioning veterans were able to access an array of coping skills (such as forward-thinking and expressing emotions) allowing them to process emotions and engage in the tasks of creating a meaningful civilian life.
5	Naphan & Elliot (2015), USA	Qualitative	Semi-structured interviews	Student Veterans (n=11) Population: served in the U.S. Armed Forces from the 9/11 terrorist attacks	To understand what transition was like for student veterans and the factors that affected how they negotiated the move back home	Framework Analysis	Student veterans' transitions from the military to civilian life are influenced by several military-related factors, including the degree of collective cohesion emphasized in the military and the clear structure of the military. Combat veterans experienced more intense bonds with their comrades, which left them feeling more isolated when they got out because it seemed like no one could relate to their military experiences.
6	Wands (2013), USA	Mixed Methods	Survey; Interviews	Gender: Male (n=6) Female (n=1) Population Service: OEF/OIF Branch: Army (n = 2) Navy (n = 2), Marines (n=3) Ages ranged from 24 to 28 years (mean = 26.3).	To explore the subjective experience of coming home from the war for veterans Draw links between subjective experiences and measures of physical/ mental health	Descriptive Statistics (percentage of scores), Narrative Inquiry	Veterans' struggles to cast off the military mindset to resume civilian living. Veterans experienced feelings of abandonment and difficulties with reconnecting with loved ones

Note: OEF=Operation Enduring Freedom; OIF=Operation Iraqi Freedom; OND=Operation New Dawn; BSCS=Brief Sense of Community Scale(Peterson et al., 2008); M2CQ=Military to Civilian Questionnaire (Sayer et al., 2011); B=beta value; SE=Standardized Estimate; CR=Critical Ratio; P=Probability Value; SF-36=Short-Form Health Service;

Table 3
Quality scoring of included studies – Critical Appraisal Skills Programme (CASP) Checklist

	Study Number					
Quality Criteria	**1**	**2**	**3**	**4**	**5**	**6**
A clear statement of aims	2	2	2	2	2	2
Qualitative methodology appropriate	2	2	2	2	2	2
Research design appropriate to meet aims	2	2	2	2	2	2
Recruitment strategy appropriate to meet aims	2	2	1	2	1	2
Data was collected in a way that addressed the research issue	2	1	2	2	1	1
Relationship between researcher and participants adequately considered	1	0	1	0	1	1
Ethical issues taken into consideration	2	2	2	2	2	2
Data analysis sufficiently rigorous	2	0	2	1	2	2
Clear statement of findings	2	1	1	2	2	2
Research value	2	1	2	2	2	2
Total	19	13	17	17	17	18

Note: Studies scored from zero (not met) to two (definitely met).

Quality Appraisal

Results from the CASP (Table 3) showed none of the six studies met all of the quality criteria, and a range of quality scores was recorded across studies (13-19).

Across all of the studies, the use of a qualitative methodology appeared appropriate and was further supported through the research aims. However, within one of the studies [2], the aims were not explicitly stated before the methodology sections. Instead, they were integrated into other sections (e.g. the design); making identification difficult. Within research, understanding philosophy is essential for results to be meaningfully interpreted and translated into research outcomes (Moon & Blackman, 2014). Six of the studies failed to report or sufficiently identify an epistemological stance, or make reference to reflexivity. One study [4] referred to the process of 'tuning in' (Shulman, 1993); an exercise where the researcher develops preliminary empathy with the participant's feelings and concerns. This involves gaining a working knowledge of military culture and terminology. The researcher also referred to the potential bias of having their son serve in the US military.

Five of the studies [1,3,4,5,6] offered a clear justification for their method of data analysis; opting for a range of qualitative approaches including thematic analysis and grounded theory. One study [2] referenced the use of coding but did not offer a theoretical framework for carrying this out. Five of the studies [1,2,4,5,6] supported their analysis and findings through the use of direct quotes. One study [3] integrated quotes within the body of text, making extraction difficult. A large factor that accounted for the variability in quality amongst the papers was the clarity in reporting. However,

none of the papers was excluded based upon quality scoring alone, as there is value in proving an insight into a topic area that is lacking in understanding.

Meta-synthesis

Through the synthesis of the six studies, three third-order constructs were developed to understand the role of social connectedness on veteran reintegration (See Table 4.) Whilst there were no direct refutations between the constructs in the papers, the translation and synthesis of the second-order constructs identified reciprocal relationships.

Table 4
Third-order constructs across studies included in meta-synthesis

	Study Number					
Third-order theme/subtheme	1	2	3	4	5	6
Establishing connections	*	*	*	*	*	*
Replicating previous bonds			*	*	*	
Connecting with the community	*	*				
Preparing for change		*	*	*	*	*
Expectations of difficulties		*				*
Managing emotions			*	*	*	*
Reuniting with previous networks	*	*	*	*		*
Feeling understood	*					*

Establishing connections

All of the studies highlighted the need to establish connections as part of the reintegration process following discharge from the military**.** An increased emphasis was placed upon the social aspect of reintegration, the components that make up its success, and the varying degrees in which this can be achieved.

Replicating previous bonds. Three studies [3, 4, 5] emphasized the importance of the bonds forged in service. The depth and quality of these relationships, whilst paramount, were seen as difficult to forge after returning to civilian life:

> ‘So going through that with somebody inevitably will create an attachment… I don’t see eye to eye with a lot of the friends that I’ve made over time. But because of the situation that we were both in, we created bonds that are virtually, not unbreakable, but very close to unbreakable. [4, p.131]

Many of the veterans spoke of experiencing closeness within one-to-one friendships; describing them as deeper than their other relationships. One study [3] describes these relationships as ‘battle buddies’ whilst another likened them to ‘close family’ [5]. Similarly, these bonds were seen as strong as veterans had with their immediate families. Replicating these within the community was a difficulty as connecting with others through a shared purpose was a challenge. Often, veterans described feeling misunderstood due to their own experience, but also failing to understand those around them, what they stand for and their purpose. As a result, it was difficult to begin building relationships and experience socials bonds with others; significantly reducing the many benefits veterans had experienced whilst serving as part of a team:

> ‘It's like you have a real, true connection with other people- you know, the people in your unit. It's like... there's so much going on that's unspoken. You know what I mean? [5, P.44]

It appeared that old bonds with comrades perhaps set a context for how bonds with non-military friends would be perceived in the community; highlighting their influence on meeting new people and gaining new friends: “I don’t see eye to eye with a lot of the friends that I’ve made over time since coming home” [4, P.131].

One study [4] also offered an account of bonding beyond relationships and comradery; suggesting more depth to them. Veterans referenced the need to rely on their team, in a way that shows they were willing to die for them. Two studies [4,5] particularly highlighted the creation of these bonds through basic training and deployment experiences: “I think that it made me learn what’s really important with friendship. Man, these guys’ll die for you.” [4, P.132]. Bonding and connecting during reintegration were seen as the development of entirely new relationships.

> ‘It’s a different type of relationship... so it's impossible to make the experience translate, but, most people can understand the concept of going through something extremely difficult with somebody, and there being a bond created’. [5 P.43]

Whilst these relationships differed, there was some optimism from the veterans that the reintegration process could be eased through a shared understanding of the impact of the experience.

Connecting with the community. Two studies [1,2] emphasised the importance of community and through connecting with community groups, veterans could begin to experience a sense of cohesion and acceptance. Engaging in activities [2] was described as a meaningful and life-affirming means of connecting with others. This was not just due to being immersed in new social groups, but shifting focus from past military activities that were seen as more 'destructive' in nature:

> 'Working at the community agriculture initiative is a bit of catharsis, sort of r-engaging and being a veteran but in a way that's not focused on savvy war stories…'. [2,P.75].

These opportunities within the community appeared to direct focus away from the military experience, and towards establishing new connections through other channels of interest and experience.

One study [1] highlighted the differences in understanding between military communities and those at home. One veteran reported 'civilians don't understand you' and this created difficulties finding their place in a new community group. This was attributed to a lack of understanding around the function of the military, what purpose it offers to its members and how comradery and bonding are integral to survival:

> 'It's really hard for anyone else to understand…You know, they don't understand the military concept, and it's hard to blend in with them…It's a different atmosphere'. [1, P170].

Lack of respect from civilians was seen as a significant barrier towards connecting [1,2]. This was not because veterans expected an overzealous acknowledgement of their service, but more so that their contribution was worthwhile, and that they left the military with transferable skills useful in the wider community: "I was good at my job…I was in charge of people and I did a good job" [1, P170]. However, connecting to new people was seen as difficult for all veterans [1] due to the training and mentality that is integrated within the system: "I think dealing with the zero-defect mentality that the military ingrains in you makes it difficult to adjust" [1,

P171]. Letting go of previous military mentalities appeared to be a difficulty, creating future problems when faced with new social situations; whereby the need to connect to others conflicted with the regimented mentality of the military.

The reintegration process appeared to be managed well by those who were actively integrating into communities alongside other veterans of similar experiences [2]. However, this was seen as more difficult within a 'new community' context: "Are you gonna accept me the same? Am I gonna accept you the same?" [5, P.191]. Acceptance was highlighted as an important aspect of the process and this was reciprocal between veterans and civilians.

Preparing for change

All of the studies but one [1] referred to the preparation involved in reintegrating back into the community and how this would be impacted by their experience connecting with others. This included carrying out no preparation [2], gaining no support from the system [4] and fear of being seen as] different [3,5,6]

Expectations of difficulties. How veterans perceived their future difficulties appeared to be influenced by how successful they were in integrating into new social circles. Participation in community projects was a successful way of allowing veterans to become more open; improving interaction and communication [2]. However, expectations did not always align with the veteran's experience, with some surprised at the amount of time taken to connect successfully to others but equally reaping the benefits of this:

> 'What I got to learn was it was a slow approach… allowing for more involvement and communication with the people on the ground..' [2, P.76]

The studies also highlighted how the integration process could be negative or positive; offering similar ways of conceptualising it. One study [6] discussed the benefits of holding a positive outlook whilst balancing their expectations. Following reintegration, this offered opportunities to reach out to other veterans experiencing difficulties connecting with society; creating a sense of 'belonging'. This was echoed within the second study [2] whereby a sense of belonging was sought, but not contemplated until the individuals had left the military. Whilst this did not make it impossible to establish new social connections, it did create an unnecessary gap within

the transition process*:* 'I didn't think it was important to me when I got out but it really is.'[2, P.77]

One study discussed how a veteran's expectations could be influenced by their individual combat experience. One participant who had witnessed comrades die had developed a more optimistic outlook of their reintegration, as the social integration difficulties that may follow were 'trivial':

> 'It's kinda grim, but life can be taken away so fast..'
>
> 'I don't waste time in any aspect of my life. Because of my experiences.., I realized that life is short. Just concentrate on things that are important.".' [6, P. 195]

However, this was not always a positive experience, with some veterans reporting longer-lasting negative effects of witnessing comrade deaths: "…I think it's a part of me now. I don't know how to let that go, and to be frank…" [6, P.195]. This then impacted their ability to socially integrate; ultimately contributing to the development of mental health difficulties.

Managing emotions. Feeling emotionally unprepared for the future and learning how to overcome this was a particular challenge [3,4,5,6]. It appeared that it was less the emotions themselves that created reintegration difficulties, but more so how they were managed and their impact within social contexts. The focus was primarily placed upon securing employment and managing work difficulties post-discharge, with little focus on emotional stability:

> One thing I remember debriefing they're big on you getting a job and working. Military people, we know how to work and we know how to keep busy. But to debrief on the more emotional level and to get those involuntary reactions, somehow to go back to the people we were before we joined. [4, P.103]

This was described as an internal struggle, with pressure to reconcile the former and current self in social contexts; leading to difficulties containing negative emotions:

"My anger was getting so bad."[6, P.196]. This created added pressure to 'belong' to these new social groups; leading individuals to internalise feelings until they were eventually expressed in unhelpful ways.

One study echoed the importance of feeling emotionally connected to others; highlighting the difficulty with this process when emotions are not managed. As a result, disruptions in newly developed relationships occurred, or a significant reduction in the creation of new ones [5]. This was attributed to the mismatch between emotional intensity and the social context. Powerful or negative emotions were seen as not appropriate in a societal context and this led to frustration; leaving veterans unsure as to how to act and how to vent and manage these feelings:

> "Christmas, I snapped on my sister. We were arguing and I got to a level as if I was on deployment, volume-wise. It was scary. I scared her. I wasn't angry at her. We were arguing but it wasn't anger towards her. It was just natural, felt normal……You do a certain thing for so long, it becomes a reaction. You know, it's part of you. And if you don't address it, it stays there. So…" [4, P.111]

As these relationships were familiar, and means of managing negative emotions was shared within the military context; emotional transitioning appeared to be a factor left unaddressed. Another study suggested addressing this difficulty through 'emotional debriefing' before discharge; allowing veterans to manage emotions in contexts other than the military [4]. As veterans hold several considerable transferable skills they take into the community, it was frustrating to some that emotional management was not prioritised:

> "I think everyone should have counselling as soon as they get out and immediately start emotional debriefing… I don't think they debriefed you….. [4 P. 103]

The impact of not receiving this input left veterans struggling within the social context; feeling as though they have almost missed a step within the reintegration process. This experience is later internalised and could potentially lead to future difficulties both emotionally and socially: ["[I feel] out of touch and alone", 3 P. 23]

Reuniting with previous networks

Reconnecting with loved ones was seen as essential to the reintegration process [3,4]. This was to not only satisfy emotional needs [1,2] but to re-join familiar social

circles [6]. However, this was equally seen as problematic, with veterans feeling out of place or facing communication barriers they had not anticipated.

Feeling understood. Across two of the studies [1,6] there was an agreement that despite families offering a safe and secure base to return to, veterans continued to feel misunderstood. This was described as an even deeper experience by one study [1] as it posed two distinct dilemmas; losing the group they once belonged to, and not knowing where you belong now:

> 'You go home, [and] you don't know how much you've changed until you start to get around family and friends…' [1, P.171]

Equally, there was an intense fear that those who had loved and cared for them before would come to realise that the bond was gone and veterans were unsure how to relate to family again:

> "I was kind of scared . . . Can we still even relate?"[6, P.191].

The veterans reported feeling afraid to be amongst family and friends in social situations; unsure of their place, how to act and why they felt this way:

> 'I felt really confused and out of place when I got back'; 'I felt like I didn't belong'; 'I was afraid of being alone with family and friends because they don't get me' [1, P.171]

Resuming relationships and social connections appeared to be a struggle; demanding a large amount of attention and energy, taking its toll emotionally. Everyday social interactions were impacted and the ability to even speak of military experience failed to present as a conversation starter [6]. This posed the question to many, "Can you pick up where you left off?". One veteran felt this was not an easy feat; despite holding strong relationships before military deployment:

> "My dad is, has always been a good dad, and we always had stuff to talk about . . . [but] we didn't have anything to say to one another" [6, P.191]

However, there was also value and comfort within existing relationships, with some finding encouragement within the process [6]. Whilst it was unclear what factors mediated the positive or negative contribution of re-joining family and friends, it was clear that the process itself was difficult.

Line of Argument Synthesis

Social connectedness was seen as playing an important role within the reestablishment of previous connections, the creation of new ones, and managing the difficulties that accompany this process. Most veterans expressed the biggest difficulty was the transferring of social bonds from one context to another, as previously being immersed in an environment surrounded by comradery and support allowed for the organic creation of connectedness amongst military members. However, the loss of this secure base and attachment to others was felt significantly following reintegration. As a result, despite the want and need of some to connect with others, there appeared to be both an internal and external struggle. This was not only evident in forming new connections but also returning to established ones with friends and family. Adapting to changes, feeling understood and creating a sense of social cohesion was a significant challenge and this brought about several barriers to belonging.

Equally, the ability to manage emotions was seen as an important aspect of connecting to others; presenting itself as an internal struggle. Veterans reported often feeling in 'limbo'; attempting to reconcile their current and previous self. Within social circles, this posed challenges around how to act, feel, and what to say. This pressure often led to outbursts of negative emotions such as anger and frustration; ultimately impacting their ability to sustain old and form new relationships. Additionally, it was clear to the veterans that a gap exists around managing these difficult emotions as part of the reintegration process. Many held insight into how this may impact their later relationships but few knew how to reconcile this effectively. Whilst holding a positive perception of the challenges ahead worked for some, often the potential negative repercussions were at the forefront of their minds.

Discussion

The review aimed to systematically identify and review the literature around social connectedness and reintegration to offer insight into what role this plays if any. From the synthesis, implications for future research and practice have been identified as well as the role social connectedness plays within reintegrating veterans.

The scope of the review was concise to allow for the inclusion of relevant qualitative papers; including mixed-methodology papers as well as address the research question. Qualitative data provided insight into the role of social connectedness through the deconstructing of individual veterans experiences following discharge. Whilst one paper was excluded from analysis (Gorman et al., 2017), the study did conclude the importance of connecting veterans to their civilian community and how this can be an empowering process through the use of shared community activities (i.e. veteran and non-veteran coffee socials).

From the review, it was evident that social connectedness can have positive and negative effects on the reintegration process for veterans and how they perceive 'belonging' to social groups (Fisher, Overholser, Ridley, Braden, & Rosoff, 2015). The review's definition was reflected within participant's accounts of their experiences; particularly the 'subjective psychological bond' they experience with others (Haslam et al, 2015; Hare-Duke, Dening, de Oliveira, Milner, & Slade, 2019). This bond was seen as protective but also difficult to achieve due to some barriers. A consistent difficulty highlighted was the idea of 1) leaving an already established group of individuals that have served a social and emotional purpose during deployment, and 2) returning to or establishing new groups that offer similar functions and address the veteran's needs to find 'a new normal' (Ahern et al., 2015). It could be argued that the military offers a secure base to their personnel; as the model provides stability, bonding, and a sense of comradery where individuals feel secure (Bowlby, 1988). This may lead to a significant rupture when veterans are discharged and are required to either re-establish previous bases (through family/friends) or create new ones. Adults who are insecurely attached have been shown to display recurring negative behaviours in relationships, such as intense emotions (anger, fear), controlling behaviours, and tendencies to shy away from social contact (Gentzler, Kerns, & Keener, 2010). This, therefore, suggests that veterans are susceptible to this difficulty through the reintegration process; particularly when no support in connecting with new individuals is offered. Whilst attachment has been explored within veteran literature, this has primarily focussed upon PTSD (Currier, Holland & Allen, 2012) and therefore little has considered the links between social connectedness and attachment.

The implication of this relates particularly to the process of supporting veterans during reintegration back into the community. A significant amount of focus is placed upon mental health and supporting this is a key factor to ensure a successful transition (Tick, 2012). However, neglecting social aspects, particularly the effects of belonging to a social group within the military have the potential to create numerous difficulties in the community. The review has therefore highlighted that the role the community plays is both protective and important for a veteran's wellbeing trajectory. Whilst veterans are unclear as to how they can bridge the gaps that follow when leaving their comrades behind and establishing new connections within the community, they do offer insight into why these connections are important, and what benefits they provide for their well-being. Similarly, social connectedness is not a concept that veterans are unaware of, with many contemplating future difficulties, but remaining unclear how to address this head-on. Continuing to further understand the needs of veterans and the process that social connectedness plays would not only work towards reducing difficulties within the reintegration experience but also lead to an understanding of how veterans can achieve a sense of closure and positively end their military experience.

Limitations

A limitation of the review is that the studies were not diverse in terms of their location with all six studies originating from the USA. This significantly reduces the generalisability to veterans and places social connectedness within a specific veteran culture through the third-order constructs.

However, we can conclude that evidence is needed within other countries (such as the UK) to compare experiences but also confirm or refute the accounts of how social connectedness can play a key role in the process of reintegration. It could be argued that the inclusion criteria constrained the possibility of other papers that may be relevant to the research question. However, given the overlap and interchange of concepts to describe 'reintegration' within military literature (Elnitsky, Fisher, & Blevins, 2017) strict, clear criteria needed to be used so that the review question could be addressed. Similarly, the extent to which authors were influenced by their backgrounds and theoretical stance was unclear from the quality appraisal; meaning interpretations should be taken with some caution.

Conclusion

To conclude, the findings of the meta-synthesis both confirm previous findings around the importance of social connectedness following reintegration, and also offer new insight into what veterans leave behind and the struggles they face moving forward. The process lends itself to attachment theory; a link that has not been suggested previously to the researchers' knowledge. Therefore, future research that examines this within other populations outside of the USA, and shows how to support veterans to overcome these difficulties will positively contribute towards a smoother reintegration experience.

References

Ahern, K. R., Daminelli, D., & Fracassi, C. (2015). Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics*, *117*(1), 165-189. https://doi.org/10.1016/j.jfineco.2012.08.006

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529. https://doi.org/10.1037/0033-2909.117.3.497

Besterman-Dahan, K., Chavez, M., & Njoh, E. (2018). Rooted in the community: Assessing the reintegration effects of agriculture on rural veterans. *Archives of Physical Medicine and Rehabilitation, 99*(2), S72-S78. https://doi.org/10.1016/j.apmr.2017.06.035

Boermans, S. M., Kamphuis, W., Delahaij, R., van den Berg, C., & Euwema, M. C. (2014). Team spirit makes the difference: The interactive effects of teamwork engagement and organizational constraints during a military operation on psychological outcomes afterwards. *Stress and Health, 30*(5), 386-396. https://doi.org/10.1002/smi.2621

Bowlby, J. (1988). *A secure base: Clinical applications of attachment theory*. London: Routledge

Briggle, L. (2013). *Veterans' perceptions of reintegration challenges and their most valuable social supports* (Doctoral Thesis, University of Central Florida, Florida, USA) Retrieved from https://pdfs.semanticscholar.org/a17b/3e7dd5fcef3361e190d86f312597bbda8aa5.pdf

Caddick, N., Smith, B., & Phoenix, C. (2015). Male combat veterans' narratives of PTSD, masculinity, and health. *Sociology of health & illness*, *37*(1), 97-111.

Carlson, J. S., Demaray, M. K., & Hunter-Oehmke, S. (2006). A survey of school psychologists' knowledge and training in child psychopharmacology. *Psychology in the Schools*, *43*(5), 623–633. https://doi.org/10.1002/pits.20168

Cogan, A. M. (2016). Community reintegration: Transition between the figured worlds of military and family life. *Journal of Occupational Science, 23*(2), 255-265. https://doi.org/10.1080/14427591.2015.1114509

Critical Appraisal Skills Programme. (2018). *CASP Qualitative Checklist*. Retrieved from https://casp-uk.net/wp-content/uploads/2018/03/CASP-Qualitative-Checklist-2018_fillable_form.pdf

Currie, S. L., Day, A., and Kelloway, E. K. (2011). Bringing the troops back home: modeling the post-deployment reintegration experience. *J. Occup. Health Psychol.* 16, 38–47. https://doi.org/10.1037/a0021724

Currier, J. M., Holland, J. M., & Allen, D. (2012). Attachment and mental health symptoms among U.S. Afghanistan and Iraq veterans seeking health care services. *Journal of Traumatic Stress, 25*(6), 633– 640. https://doi.org/10.1002/jts.21752

Demers, A. (2011). When veterans return: The role of community in reintegration. *Journal of Loss and Trauma, 16*(2), 160-179. https://doi.org/10.1080/15325024.2010.519281

Dixon-Woods, M., Sutton, A., Shaw, R., Miller, T., Smith, J., Young ,B., … Jones, D. (2007) Appraising qualitative research for inclusion in systematic reviews: A quantitative and qualitative comparison of three methods. *Journal of Health Services Research & Policy, 12*(1), 42–47. https://doi.org/10.1258%2F135581907779497486

Easton, G. (2010). Critical realism in case study research. *Industrial marketing management*, *39*(1), 118-128. https://doi.org/10.1016/j.indmarman.2008.06.004

Elnitsky, C. A., Blevins, C. L., Fisher, M. P., & Magruder, K. (2017). Military service member and veteran reintegration: A critical review and adapted ecological model. *American Journal of Orthopsychiatry, 87*(2), 114-128. https://doi.org/10.1037/ort0000244

Erwin, E. J., Brotherson, M. J., & Summers, J. A. (2011). Understanding qualitative meta-synthesis: Issues and opportunities in early childhood intervention research. *Journal of Early Intervention, 33*(3), 186–200. https://doi.org/10.1177/1053815111425493

Evans, D. (2002). Database searches for qualitative research. *Journal of the Medical Library Association, 90*(3), 290–293. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC116400/

Fischer, E. P., Sherman, M. D., McSweeney, J. C., Pyne, J. M., Owen, R. R., & Dixon, L. B. (2015). Perspectives of family and veterans on family programs to support reintegration of returning veterans with posttraumatic stress disorder. *Psychological Services, 12*(3), 187-198. https://doi.org/10.1037/ser0000033

Fisher, L. B., Overholser, J. C., Ridley, J., Braden, A., & Rosoff, C. (2015). From the outside looking in: Sense of belonging, depression, and suicide risk. *Psychiatry, 78*(1), 29-41. https://doi.org/10.1080/00332747.2015.1015867.

Frankfort-Nachmias, C., & Nachmias, D. (2007). *Research Methods in the Social Sciences* (7th ed.). New York: Worth Publishing

Fritz, H. A., Lysack, C., Luborsky, M. R., & Messinger, S. D. (2015). Long-term community reintegration: Concepts, outcomes and dilemmas in the case of a military service member with a spinal cord injury. *Disability and rehabilitation, 37*(16), 1501-1507. https://doi.org/10.3109/09638288.2014.967415

Gentzler, A. L., Kerns, K. A., & Keener, E. (2010). Emotional reactions and regulatory responses to negative and positive events: Associations with attachment and gender. *Motivation and Emotion*, *34*(1), 78-92. https://doi.org/10.1007/s11031-009-9149-x

Gorman, J. A., Scoglio, A. A., Smolinsky, J., Russo, A., & Drebing, C. E. (2018). Veteran coffee socials: A community-building strategy for enhancing community reintegration of veterans. *Community Mental Health Journal, 54*(8), 1189-1197. https://doi.org/10.1007/s10597-018-0299-8

Hare-Duke, L., Dening, T., de Oliveira, D., Milner, K., & Slade, M. (2019). Conceptual framework for social connectedness in mental disorders: Systematic review and narrative synthesis. *Journal of Affective Disorders, 245*, 188–199. https://doi.org/10.1016/j.jad.2018.10.359.

Harvey, S. B., Hatch, S. L., Jones, M., Hull, L., Jones, N., Greenberg, N., …Wessely, S. (2011). Coming home: Social functioning and the mental health of UK Reservists on return from deployment to Iraq or Afghanistan. *Annals of Epidemiology, 21*(9), 666-672. https://doi.org/10.1016/j.annepidem.2011.05.004

Haslam, C., Cruwys, T., Haslam, S. A., Dingle, G., & Chang, M. X. L. (2016). Groups 4 Health: Evidence that a social-identity intervention that builds and strengthens social group membership improves mental health. *Journal of Affective Disorders, 194*, 188-195. https://doi.org/10.1016/j.jad.2016.01.010

Hopewell, S., McDonald, S., Clarke, M. J., & Egger, M. (2007). Grey literature in meta-analyses of randomized trials of health care interventions. *Cochrane Database of Systematic Reviews*, (2).

Hotopf, M., Hull, L., Fear, N.T., Browne, T., Horn, O., Iversen, …Wessely, S. (2006). The health of UK military personnel who deployed to the 2003 Iraq war: A cohort study. *The Lancet, 367*(9524), 1731-1741. https://doi.org/10.1016/S0140-6736(06)68662-5

Kealey, D. J., & Protheroe, D. R. (1996). The effectiveness of cross-cultural training for expatriates: An assessment of the literature on the issue. *International Journal of Intercultural Relations*, *20*(2), 141-165. https://doi.org/10.1016/0147-1767(96)00001-6

Kirk, J., Miller, M. L., & Miller, M. L. (1986). *Reliability and validity in qualitative research*. Newbury Park, CA: Sage Publications

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., ...Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *PLOS Medicine, 6*(7), e1000100. https://doi.org/10.1371/journal.pmed.1000100.

McLeod, B. D., & Weisz, J. R. (2004). Using dissertations to examine potential bias in child and adolescent clinical trials. *Journal of Consulting and Clinical Psychology*, *72*(2), 235.

Ministry of Defence. (2016). *Armed Forces Covenant.* Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49469/the_armed_forces_covenant.pdf

Mitchell, K. (2017). *Becoming whole again: A qualitative study of veterans' return to civilian life* (Doctoral Dissertation, Stony Brook University, New York, USA) Retrieved from https://ir.stonybrook.edu/jspui/bitstream/11401/76780/1/Mitchell_grad.sunysb_0771E_13246.pdf

Moon, K., & Blackman, D. (2014). A guide to understanding social science research for natural scientists. *Conservation Biology*, *28*(5), 1167-1177. https://doi.org/10.1111/cobi.12326

Naphan, D. E., & Elliott, M. (2015). Role exit from the military: Student veterans' perceptions of transitioning from the U.S. military to higher education. The Qualitative Report, 20(2), 36-48. Retrieved from

https://nsuworks.nova.edu/cgi/viewcontent.cgi?referer=https://scholar.google.co.uk/&httpsredir=1&article=2094&context=tqr/

Noblit, G.W., & Hare, R. D. (1988). *Meta-ethnography: Synthesizing qualitative studies*. Newbury Park: Sage

Noyes, J., & Popay, J. (2007). Directly observed therapy and tuberculosis: How can a systematic review of qualitative research contribute to improving services? A qualitative meta-synthesis. *Journal of Advanced Nursing, 57(*3), 227-243. https://doi.org/10.1111/j.1365-2648.2006.04092

Pittman, J. O., Goldsmith, A. A., Lemmer, J. A., Kilmer, M. T., & Baker, D. G. (2012). Post-traumatic stress disorder, depression, and health-related quality of life in OEF/OIF veterans. *Quality of Life Research, 21*(1), 99-103.

Randall, D., Thomas, M., Whiting, D., & McGrath, A. (2017). Depression anxiety stress scales (DASS-21): Factor structure in traumatic brain injury rehabilitation. *Journal of Head Trauma Rehabilitation, 32*(2), 134-144. https://doi.org/10.1097/HTR.0000000000000250

Resnik, L., Bradford, D. W., Glynn, S. M., Jette, A. M., Johnson Hernandez, C., and Wills, S. (2012). Issues in defining and measuring veteran community reintegration: Proceedings of the working group on community reintegration, VA Rehabilitation Outcomes Conference, Miami, Florida. *Journal of Rehabilitation Research & Development, 49(1),* 87–100. https://doi.org/ 10.1682/JRRD.2010.06.0107

Sandelowski, M., Docherty, S., & Emden, C. (1997). Qualitative meta-synthesis: Issues and techniques. *Research in Nursing and Health, 20*(4), 365-371. https://doi.org/10.1002/(SICI)1098-240X(199708)20:4%3C365::AID-NUR9%3E3.0.CO;2-E

Sayer, A. (1992). *Method in social science: A realist approach* (2nd ed.) London: Routledge.

Sayer, N. A., Frazier, P., Orazem, R. J., Murdoch, M., Gravely, A., Carlson, K. F., … Noorbaloochi, S. (2011). Military to civilian questionnaire: A measure of post-deployment community reintegration difficulty among veterans using Department of Veterans Affairs medical care. *Journal of Traumatic Stress, 24*(6), 660-670. https://doi.org/10.1002/jts.20706

Sayer, N. A., Carlson, K. F., & Frazier, P. A. (2014). Reintegration challenges in US service members and veterans following combat deployment. *Social Issues and Policy Review*, *8*(1), 33-73.

Shulman, L. (1993). *Teaching the helping skills: A field instructor's guide*. Alexandria, VA: Council on Social Work Education.

Simplican, S. C., Leader, G., Kosciulek, J., & Leahy, M. (2015). Defining social inclusion of people with intellectual and developmental disabilities: An ecological model of social networks and community participation. *Research in developmental disabilities*, *38*, 18-29.

Smith, B. N., Wang, J. M., Vaughn-Coaxum, R. A., Di Leone, B. A. L., & Vogt, D. (2017). The role of post-deployment social factors linking deployment experiences and current Posttraumatic Stress Disorder symptomatology among male and female veterans. *Anxiety, Stress, and Coping*, *30*(1), 39–51. https://doi.org/10.1080/10615806.2016.1188201

Thomas, J., Harden, A., Oakley, A., Oliver, S., Sutcliffe, K., Rees, R., … Kavanagh, J. (2004) Integrating qualitative research with trials in systematic reviews. *BMJ, 328,* 1010-1012. https://doi.org/10.1136/bmj.328.7446.1010

Thomas, V., & Bowie, S. (2016). Sense of community: Is it a protective factor for military veterans. *Journal of Social Service Research, 42*(3), 313-331. https://doi.org/10.1080/01488376.2015.1109575

Tick, E. (2012). *War and the soul: Healing our nation's veterans from post-traumatic stress disorder.* Wheaton, IL, US: Quest Books.

Tsai, J., Mota, N. P., Southwick, S. M., & Pietrzak, R. H. (2016). What doesn't kill you makes you stronger: A national study of US military veterans. *Journal of Affective Disorders*, *189*, 269-271. https://doi.org/10.1016/j.jad.2015.08.076

Wands, L.M. (2013). No one gets through it OK: The health challenge of coming home from war. *Advances in Nursing Science, 36*(3), 186–199. https://doi.org/10.1097/ANS.0b013e31829edcbe

Wesselmann, E. D., Ispas, D., Olson, M. D., Swerdlik, M. E., & Caudle, N. M. (2018). Does perceived ostracism contribute to mental health concerns among veterans who have been deployed? *PLOS One*, *13*(12), e0208438. https://doi.org/10.1371/journal.pone.0208438

Whitehouse, H. (2012). 10 Ritual, Cognition, and Evolution. *Grounding social sciences in cognitive sciences*, 265.

Zakin, G., Solomon, Z., & Neria, Y. (2003). Hardiness, attachment style, and long term psychological distress among Israeli POWs and combat veterans. *Personality and Individual Differences*, *34*(5), 819-829. https://doi.org/10.1016/S0191-8869(02)00073-9

JOURNAL PAPER

STAYING CONNECTED AND NAVIGATING THE PANDEMIC: A MIXED METHODS STUDY INTO THE IMPACT OF COVID-19 ON UK VETERANS

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Abstract

The COVID-19 pandemic has posed a challenge to society to cope with an unprecedented threat. Veterans with pre-existing mental health conditions may be susceptible to further re-traumatisation due to COVID-19 restrictions and increased anxiety and depression. Decreased social connectedness can play a significant role in creating barriers to coping and worsening psychological problems. This study used a two-phase sequential explanatory design to investigate the impact of COVID-19 on UK veterans. Phase 1: one-hundred and thirty participants completed an online survey with findings contributing towards the development of an interview schedule and selection of participants. Phase 2: eleven participants from phase 1 were recruited to semi-structured interviews with transcripts analysed using reflective thematic analysis. Results found: (1) a negative association between traumatic stress and social connectedness (rs=-.71, p=<.001), and dysfunctional coping strategies (rs =-.60, p=<.001), with five synthesised core themes identified from interviews: *the need for social connection, adapting is key, managing and overcoming mental health barriers, the military made me, and progression of the pandemic.* These findings provide insight into the impact of lockdown restrictions upon social connectedness, adapting and mental health. Military identity is also seen as important during the pandemic as a mechanism that can mobilise individuals to make changes in their life

Keywords: Social connectedness, Veterans, COVID-19, Coping

Introduction

The 2019 coronavirus (SARS-CoV-2; COVID-19) pandemic has posed a huge challenge to society because it tests its ability to cope with an unprecedented threat. The pandemic has not only endangered lives but has also come to impact the everyday living of individuals (Fiorillo & Gorwood, 2020; Holmes et al., 2020). The disruptions in daily life created by the need to impose restrictions to stop the spread of coronavirus have precipitated a largely unprecedented situation for millions of people in the UK, including veterans. From a population perspective, the difficulties that veterans encounter within civilian life are well documented (Harvey et al., 2011), but COVID-19 may exacerbate (or sometimes diminish) some of these or create new ones.

Psychological research has evidenced the transformational nature of serving within the military and the effect this can have on the veteran population post-discharge (Smith & True, 2014). Veterans are seen as a unique, multifaceted population, with their cultural characteristics, including codes of conduct, obedience towards command, selfless acts of duty, and intrinsically important values and identity[1] (Olenick et al., 2015). Military personnel, especially those from combat backgrounds, are trained to demonstrate resilience, readiness, and adapt to the increasingly fast-paced nature of warfare and other stressful environments, whilst maintaining optimal physical and cognitive performance (Nindl et al., 2018). However, within non-combat situations whereby they are required to manage these difficulties with less access to strategies and resources, there could be significant mental health implications. COVID restrictions within the UK (including national lockdowns) have the potential to be de-stabilizing to individuals who find themselves unable to manage their difficulties through lack of access to support. Veterans with pre-existing mental health conditions, such as PTSD, may be susceptible to further re-traumatisation. COVID-19 could be understood as a potential traumatic stressor event, capable of eliciting PTSD responses (Bridgland et al., 2021), leading to an exacerbation in symptoms of depression and anxiety (Held et al., 2020); particularly for those with pre-existing mental health conditions. Coronavirus-specific anxiety has been suggested to contribute towards heightened fear and anxiety; impacting upon behaviour and psychological well-being as the pandemic progresses

[1] See *Extended Background – Military Culture & Military Identity* for further details of military identity and culture

(Lee, 2020).[2] A recent study by Groarke et al. (2020) highlights that emotional regulation should also be considered when aiming to reduce the impact of restrictions on mental health outcomes. Veterans with existing mental health difficulties before the COVID outbreak may be at an increased risk of developing further common mental health difficulties and therefore identifying strategies to help reduce this burden is key for ensuring personal wellbeing[3]. (Murphy et al., 2020).

Veterans may face further challenges through the sudden and often detrimental loss of social support, connection and contact with social networks due to COVID restrictions. Social connectedness[4] is defined as a 'subjective psychological bond that people feel with individuals and groups of others'(Haslam et al., 2015). Bonding and a sense of connectedness with others are seen as a basic psychological need for maintaining wellbeing and mood management (Fisher et al., 2015). Recent research has suggested that decreased social connectedness can play a significant role in creating barriers to coping well during the pandemic as it progresses, as well as worsening psychological problems, in particular depression and anxiety and recurrent traumatic memories[5] (Austin et al., 2020; Teo et al., 2018; Wilkins et al., 2020). Veterans are encouraged to maintain social ties with military colleagues, as well as also connect and continue to strive for 'normal' within society (Ahern et al., 2015). This has become difficult during the UK lockdown; potentially leading to reduced social contact and opportunities for veterans to meet and support one another.

As the COVID-19 crisis continues to influence mental and physical health, how individuals perceive the world, and the way they interact with others, it is important to consider scientific means of understanding human responses (Porges, 2020). Polyvagal Theory[6] identifies a hierarchy of responses built into our autonomic nervous system and anchored in the evolutionary development of our species. When individuals are firmly grounded in their ventral vagal pathway, individuals feel safe and connected, calm and social (Porges & Dana, 2018). It could be argued that the UK lockdown impacts upon

[2] See *Extended Background – Coronavirus Anxiety* for further details of characteristics of anxiety related to COVID-19

[3] See *Extended Background – Veteran Mental Health and Coping* for further details of managing emotions, PTSD, and coping strategies

[4] See *Extended Background – Social Connectedness* for further details of social connectedness and belonging

[5] See *Extended Background – Post-traumatic Stress Disorder/Growth in Veterans* for further details of PTSD and post-traumatic growth

[6] See *Extended Background – Polyvagal Theory* for further details of polyvagal theory

the vagal pathway in that a sense of danger can trigger individuals out of this state and backwards on the evolutionary timeline into the sympathetic branch, where they are mobilized to respond and take action in the hope of returning to the safe and social state. Widespread fears of aloneness, contagion and death affect our sense of agency, relatedness and the way we behave, in addition to restrictions imposed by governments (Schimmenti et al., 2020). Veterans with potential pre-existing mental health conditions (such as PTSD) may be susceptible to further re-traumatization from COVID restrictions (Moring et al., 2020) due to the triggering of the vagal pathway, leading to an exacerbation in difficulties. Furthermore, it is unclear how individuals manage without access to social engagement networks; especially within situations whereby they find themselves isolated and without social contact due to lockdown restrictions.

Aims and objectives[7]

As a population, veterans are vulnerable to increased mental health difficulties and re-traumatisation, as well as having difficulties coping and adapting to sudden changes with routine (Williamson et al., 2018). Restrictions put in place by the government have significantly reduced (if not eliminated) essential social networks for maintaining mental wellbeing, as well as staying connected with others. COVID-19 continues to create anxiety and worry amongst the general population due to future uncertainty and potentially life-threatening consequences (Lee, 2020). The progression of the current restrictions and UK lockdowns continue to not only challenge veterans' ability to function during a global crisis, but also highlight abilities to cope, stay connected, and adapt to a potentially life-threatening disease. This present study, therefore, aims to explore the impact of COVID-19 on mental health, coping, and connecting to others. As the UK continues to ease restrictions it becomes more valuable to understand ways in which to support veterans in the event of future lockdowns within the UK, as well as understand and explore their experiences as the pandemic has unfolded. The present study had three primary aims:

(1) To investigate the relationships between coping, depression, anxiety, traumatic stress, coronavirus anxiety, and social connectedness following COVID restrictions using a cross-sectional survey

[7] See *Extended Background – Aims and objectives* for further details

We hypothesised that there would be a strong association between anxiety, depression, traumatic stress and social connectedness

(2) To use the results from the survey to inform qualitative data collection and recruitment to interviews

(3) To gain an experiential understanding of the impact that COVID restrictions may have had from the veteran perspective.

Method

The study was a mixed-methods sequential explanatory design, consisting of two phases: a cross-sectional survey and semi-structured interviews A participant selection model was used to collect quantitative data to then inform the purposive selection of participants for the more detailed qualitative phase (Creswell & Plano Clark, 2007).[8][9]

Initial quantitative data not only established a baseline to describe the sample but also allowed for an informed deductive analysis strand within the qualitative phases (Ivankova et al., 2006). Through this design and the combining of data, a greater understanding of the research topic can be gained, which may not have been discovered through analysing data separately (Bowen et al., 2017)

The study was reviewed and granted ethical approval by the Nottingham Research Ethics Committee. Informed consent was gained for both phases of the study. Participants were anonymous for the survey and provided pseudonyms for the interviews to ensure confidentiality.[10]

Phase 1: Quantitative Methodology

Sample

An online survey was used to collect data from participants who had served within the British Armed Forces (British Army, Royal Air Force and Royal Navy). [11]

The inclusion criteria were:

- Participants previously served in a branch of the British Armed Forces

[8] See *Extended Methodology – Study Design* for further details of the sequential explanatory design

[9] See *Extended Methodology – Epistemology* for details of epistemological stance

[10] See *Extended Methodology – Ethical Considerations* for further details of confidentiality, consent, and debrief

[11] See *Extended Methodology – Inclusion Criteria* for further details of inclusion and exclusion criteria

- Participants had been fully discharged from active service

There were no exclusion criteria for participants.

Sample Size. An a priori power analysis was carried out using G*Power (Faul et al., 2009) to calculate the sample size. To detect a correlation coefficient of $r = .3$ with 90% power (alpha = .05, two-tailed), a minimum sample of 112 participants would be needed.[12]

Recruitment and participants. Participants were recruited primarily through social media (i.e. Facebook, Twitter, Instagram, LinkedIn). Information about the survey was disseminated to local and national charities (i.e. Forces in the Community) and was shared on private Facebook groups via their administrator; via a snowball sampling method.

The Survey was available to complete online between September 2020 and December 2020. A total of 130 individuals completed the survey.[13]

Survey and Measures[14]

The survey comprised of socio-demographic and military-demographic questions, as well as measures relating to coping, social connectedness, mental health, PTSD, and the impact of COVID 19.[15]

Brief-COPE Scale. The Brief-COPE (Carver, 1997), is a 28-item scale used to measure various styles of coping to stressful situations, with good internal consistency (Cronbach's $\alpha = .50- .90$). Each item is scored on a 4-point Likert scale ranging from 0 to 3 (*'I haven't been doing this at all; I have been doing this a lot'*). The scale has 14 coping subscales, comprising of two items each, which cover: Emotion-focussed Coping, Problem-Focussed Strategies, and Dysfunctional Strategies (Rice et al., 2014).

The Social Connectedness Scale-Revised (SCS-R). The SCS-R (Lee et al., 2001) is a 20-item scale used to measure the interpersonal closeness that an individual experiences in his or her social world (e.g. friends, peers, society) as well as the level of

[12] See *Extended Methodology – Sample Size* for further details of calculating sample size

[13] See *Extended Methodology – Recruitment and Participants* for further details of recruitment strategy and participants

[14] See *Extended Methodology – Survey and Measures* for details of the psychometric measures and questions

[15] Psychometrics not included in this paper due to copyright

difficulty in maintaining this sense of closeness. Each item is scored on a 6-point Likert scale ranging from 1 ('Strong disagree') to 6 ('Strongly agree') with good internal consistency (Cronbach's α = .92). Higher scores indicate a higher level of social connectedness with others.

Coronavirus Anxiety Scale (CAS). The CAS (Lee, 2020) is a 6-item screening tool used to measure dysfunctional anxiety related to the COVID-19 crisis. Each item is scored on a 5-point Likert scale ranging from 0 ('*Not at all'*) to 4 ('*Nearly every day over the last 2 weeks'*). The scale has strong internal consistency (Cronbach's α = .93) for measuring COVID-related anxiety symptoms (Lee, Mathis, et al., 2020).

Measures

Patient Health Questionnaire (PHQ-9). The PHQ-9 (Kroenke et al., 2001) is a 9-item self-report screening tool used to identify cases of major depressive disorder, with a good internal consistency (Cronbach's α = .89). Each item is scored on a 4-point Likert scale ranging from 1 ('*Not at all'*) to 4 ('*Nearly every day'*).

General Anxiety Disorder Assessment (GAD-7). The GAD-7 (Spitzer et al., 2006) is a 7-item self-report screening tool used to identify cases of generalised anxiety disorder, with a high internal consistency (α = .92). Each item is scored on a 4-point Likert scale ranging from 0 ('*Not at all'*) to 3 ('*Nearly every day'*).

Post-Traumatic Stress Disorder Checklist for DSM-V (PCL-5). The PCL-5 (Weathers et al., 2013) is a 20-item self-report measure used to assess the 20 DSM-V symptoms of PTSD and responses to stressful experiences. Items are scored on a 5-point Likert (0 = "Not at all" to 4 = "Extremely"), with 4 subtypes (Intrusions, Avoidance, Negative Alterations in Cognition and Mood and Alterations in Reactivity and Arousal). Participants were also asked to rate if their chosen stressful experiences were military-related, non-military related, or both. Cut-off scores were used to identify both partial and full PTSD. The measure has a high internal consistency (α = .95)

Follow-up responses. Each measure included a follow-up question *'Do you feel your responses to the above questions are different now than they would have been before COVID-19 restrictions were imposed?'* and a qualitative question to allow the participant to elaborate ('*If so, then how?').*

COVID-Specific Questions. Two open-response questions were included in the survey to capture COVID specific experiences relating to the research questions. This included: '*What impact has the COVID-19 lockdown had on your life?'* and '*How have you coped in relation to this?'*. Participants could provide free-text responses around their experiences.

Opting in for Interviews. Participants were offered the opportunity to be considered for phase two of the study which involved an individual interview around their experiences. Participants were asked to leave their contact details if they wished to be considered.

Analysis:

Statistical Analysis[16]. IBM SPSS Statistics 26 was used to analyse data and explore the relationship between the measures of coping, mental health, social connectedness, and PTSD. Spearman's rank correlations were used to explore the research hypothesis, as well as explore new associations related to the research aims.

COVID-Specific Questions. Responses from these were used to select the interview sample for phase two (See *Selection of participants*).

Reflective Thematic Analysis[17]. Responses from the '*If so, then how'?* questions were analysed using a reflective thematic analysis approach (Braun & Clarke, 2006, 2019). The analysis was conducted using the six-step approach highlighted by Braun & Clark (2006). A mixed inductive/deductive approach was taken, integrating data-driven codes with theory from the social phenomenology (Fereday & Muir-Cochrane, 2006). A semantic approach was taken when identifying themes to identify frequent and salient themes grouped by semantic meaning. Patterns of data and broader meanings and implications were then summarised (Patton, 1990) through collating coded extracts with final themes. The final definition of the themes was discussed with the researcher's supervisors.

[16] See *Extended Methodology – Analysis* for further details of quantitative analysis and assumption testing

[17] See *Extended Methodology – Phase 1 - Reflective Thematic Analysis* for further details of qualitative data analysis

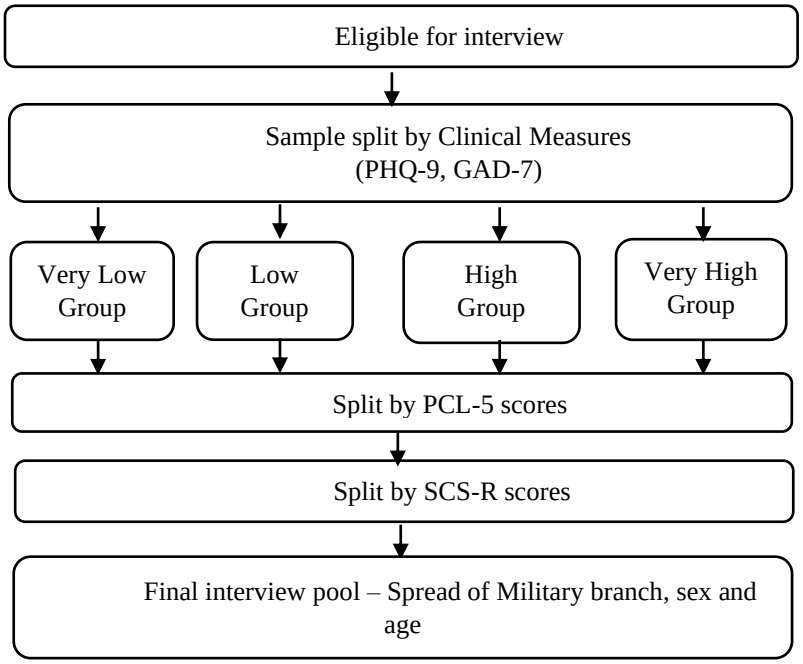
Phase 2: Qualitative Methodology

Selection of Participants[18]

Participants who opted in for an interview at the end of the survey were considered eligible. A maximum variation sampling method was used to capture a broad range of scores across participants. To select participants, the pool of individuals was first split into quartile groups based upon their scores on the clinical measures; very low, low, high, and very high (Figure 2). Following this, scores on the PCL-5, SCS-R and demographics were considered for selecting final participants.

Figure 2

Process for selecting participants for interview



Weighted Kappa[19]**.** For quartile interview groups where individuals fulfilled all criteria and could not be further distinguished, scores from the *impact* question were rated, with those of a matching agreement used. The researchers rated the responses on a 5-point scale (1- No impact, 5- Extreme impact).

[18] See *Extended Methodology – Selection of Participants* for further details of the process for selecting participants

[19] See *Extended Methodology – Kappa – Development of the 'Impact' likert scale* for details of the kappa analysis

Development of interview schedule

Overarching themes and sub-themes from the qualitative analysis of the open-ended survey responses were used to inform the semi-structured interview schedule[20].

Interviews

Interviews were carried out remotely due to the COVID-19 UK restrictions via telephone or using an online video platform (e.g. Zoom, MS Teams). Interviews were recorded via the online platform (where available) as well as via Dictaphone. Interviews were then transcribed via the University of Nottingham Transcription service and were later checked by hand. All interviews were carried out by the author.

Analysis

Reflective Thematic Analysis. A reflective thematic analysis approach[21] was also used to analyse the interview responses (Braun & Clarke, 2019). The use of a mixed inductive/deductive approach allowed for an integrated approach to be used, whereby codes were data-driven as well as informed by results from phase one of the study (Fereday & Muir-Cochrane, 2006). A semantic approach was used to identify and draw meaning from the data. Data was imported into Nvivo 12 (2020) software to be analysed. Transcripts were read and then re-read for familiarity, with notes made during this process. The data from the transcripts were then grouped together under corresponding codes and then sorted into initial themes. Themes were then reviewed with extracts, discussed with supervisors, refined, and then defined. A thematic map was created to highlight the final themes generated from the analysis.

Results

Phase 1: Survey

Participant Characteristics[22]

Characteristics were used to describe the sample (Table 5). The sample comprised 112 males and 18 females. The mean of the sample was 53.1 years, with a wide range of ages from 27-80 years old. British Army veterans made up a large portion

[20] See *Extended Methodology – Interview Schedule Development* for details how the interview schedule was created

[21] See *Extended Methodology – Phase 2 - Reflective Thematic Analysis* for details of the TA analysis

[22] See *Extended Results – Participant Characteristics* for further details of the sample

of the sample (69.2%), followed by the Royal Air Force (20.8%) and the Royal Navy (9.2%).

Table 5

Participant Characteristics

		Survey Respondents (n=130)
Age	Mean (SD)	53.1 (11.8)
	Range	27-80
Sex	Male	112 (86.2%)
	Female	18 (13.8%)
Military branch	British Army	90 (69.2%)
	Royal Navy	12 (9.2%)
	Royal Air Force	27 (20.8%)
Years of service	Mean (SD)	15.3 (9.0)
	Range	2-40
Discharge circumstances	Normal service leaver	87 (66.9%)
	Early service leaver	42 (32.3%)
Years since discharge	Mean (SD)	19.1 (13.0)
	Range	1-52

Descriptive Statistics[23]

Descriptive statistics (Table 6) showed that participants displayed, on average, mild symptoms of anxiety and depression. With regards to social connectedness, scores fell within the 50th and 75th percentile indicating a good level of connectedness. Little or no symptoms of coronavirus anxiety were displayed within the sample. Emotion-focussed coping was the most highly reporting coping style amongst participants. Symptoms of PTSD were low, with most participants (83.8%) failing to meet the threshold for partial or full PTSD.

[23] See *Extended Results – Descriptive Statistics* for further details of the psychometric measures

Table 6

Descriptive statistics of psychometric measures

Measures	N (%)	Mean	SD	Range	Cronbach's alpha
PHQ-9		7.5	7.0	0-27	.93
Mild	65 (50.0%)	-	-	-	
Moderate	29 (22.3%)	-	-	-	
Moderately Severe	19 (14.6%)	-	-	-	
Severe	17 (13.1%)	-	-	-	
GAD-7		5.8	5.9	0-21	.95
Mild	76 (58.5%)	-	-	-	
Moderate	28 (21.5%)	-	-	-	
Moderately Severe	14 (10.8%)	-	-	-	
Severe	12 (9.2%)	-	-	-	
SCS-R		81.2	20.8	25-116	.95
CAS		0.7	1.9	0-10	.81
Emotion-Focused Coping		21.4	5.0	10-33	.70
Acceptance		5.9	1.9	2-8	.74
Emotional Support		3.7	1.8	2-8	.80
Humour		5.1	2.0	2-8	.85
Positive Reframing		4.2	1.8	2-8	.70
Religion		2.4	1.2	2-8	.90
Problem-Focused Strategies		11.6	4.1	6-22	.75
Active		4.6	1.9	2-8	.66
Instrumental Support		3.0	1.4	2-7	.67
Planning		4.0	1.6	2-8	.71
Dysfunctional Strategies		18.8	5.8	12-42	.77
Denial		2.6	1.1	2-6	.50
Self-Distraction		4.7	1.8	2-8	.35
Substance Use		2.8	1.5	2-8	.92
Behavioural Disengagement		2.6	1.1	2-8	.70
Venting		3.3	1.4	2-8	.58
Self-Blame		2.9	1.5	2-8	.66
PCL Total Score		18.0	19.3	0-78	.97
Intrusions		3.9	5.0	0-20	.93
Avoidance		1.7	2.4	0-8	.93
NACM		6.3	7.2	0-28	.93
AR		6.9	7.1	0-28	.90
Military-related experience	31 (23.8%)				
Non-military related experience	47 (36.2%)				
Both	52 (40.0%)				
PTSD Met	18 (13.9%)				
PTSD Partially Met	3 (2.3%)				
PTSD Not Met	109 (83.8%)				

The PCL-5, GAD-7, PHQ-9 and SCS-R scales were found to have excellent internal consistency (.93-.97) with the CAS showing good consistency (.81). Subscales of the Brief COPE showed Cronbach's alpha ranging from .50-.92, with the three coping strategy categories displaying good internal consistency (.70-.77).[24]

[24] See *Extended Results – Cronbach's Alpha* for further details of calculating internal consistency

Spearman's Rank

Spearman's Rank correlations were run due to the data violating the assumptions of normality[25]. Effect sizes were primarily used to understand the magnitude of differences found between the variables, with statistical significance offering the likelihood of results occurring due to chance (Sullivan & Feinn, 2012). As the study had few planned correlations, data was not adjusted for multiple comparisons (Althouse, 2016)

Results[26]. Correlations were carried out to test the hypothesis related to the first research aim. There were strong correlations between GAD-7, PHQ-9, PCL-5 and SCS-R scores (r_s= -.64-.87; Table 7).

Table 7

Spearman's correlations between clinical measures and social connectedness

Variable	PHQ-9	GAD-7	SCS-R	PCL-5
PHQ-9	-	-	-	-
GAD-7	.87** [.821, .906]	-	-	-
SCS-R	-.67** [-.755, -.563]	-.64** [-.731, -.526]	-	-
PCL-5	.84 ** [.781, .884]	.85** [.795-.891]	-.71** [-.786, -.613]	-

Note. n=130 [95% Confidence interval based on 130 samples] PHQ-9= Patient Health Questionnaire-9; GAD-7= Generalised Anxiety Scale-7; SCS=Social Connectedness Scale Revised;PCL-5=PTSD Checklist for DSM-V

***P*<.001 for two-tailed correlations

Correlations were then carried out to explore associations between variables to answer the research aims. There was a strong negative association between traumatic stress and social connectedness (r_s =-.71, p=<.001), and dysfunctional coping strategies (r_s =-.60, p=<.001; Table 8).

[25] See *Extended Results – Assumption Testing* for further details of data testing and non-parametric assumptions

[26] See *Extended Results – Further Correlational Analysis* for further details of additional correlational analysis

Table 8

Spearman's correlations between coping, social connectedness, PTSD and Coronavirus anxiety

Variable	EFC	PFS	DS	CAS	SCS-R	PCL-5
EFC	-	-	-	-	-	-
PFS	.55** [.418, .659]	-	-	-	-	-
DS	.31** [.146, .457]	.49** [.348, .61]	-	-	-	-
CAS	.11 [-.063, .276]	.41** [.256, .543]	.48** [.336, .602]	-	-	-
SCS-R	.04 [-.133, .21]	-.11 [-.276, .063]	.40** [-.535, -.245]	.27** [.103, .422]	-	-
PCL-5	.12 [-.053, .286]	.35** [.19, .492]	.60** [-.699, -.478]	.43** [.279, .56]	-.71** [-.786, -.613]	-

Note. n=130 [95% Confidence interval based on 130 samples]; EFC= Emotion Focussed Coping; PFS= Problem Focussed Strategies; DS= Dysfunctional Strategies; CAS=Coronavirus Anxiety Scale

***P*<.001 *for* two-tailed correlations

Analysis of Survey Responses

Reflective thematic analysis was carried on responses to open-ended questions. The analysis produced three overall themes. (Table 9) [27] Themes were discussed with supervisors to construct the interview schedule. Care was taken to ensure that all aspects of the themes/sub-themes were covered within the interview schedule.

Table 9

Themes and sub-themes from survey analysis

Theme	Number of Occurrences (%)	Sub-theme	Participant extracts
Living through the pandemic	35 (38.4%)	Motivation/Effort	▪ Life seems a lot less necessary now. There is little incentive to try.
		Government guidance/following guidelines	▪ Aware of the proximity of people, use of masks and increased handwashing, more so to protect my wife.
		Changes to coping strategies	▪ They shut the gym which helped me deal with my mental health issues loads better. Even though things have reopened I have trouble going because I struggle with changes to routine
Connecting with others	32 (35.2%)	Changes to personal relationships	▪ Separation from family and friends made me appreciate what I had more.
		Social restrictions	▪ Isolation leading to feelings of disconnect.
Changes to psychological state	24 (26.4%)	Mood changes	▪ My anxiety has increased, and I leave the house very very little
		New feelings emerging	▪ Find myself very bored and frustrated compared to before.
		The role of thoughts	▪ Extra time has let my mind drag up events I'd sooner forget

[27] See Extended Results *Survey Responses - Analysis* for TA analysis from phase 1

Phase 2: Interviews

Sample Characteristics

Eleven participants were interviewed across all three branches of the UK military (Table 10).[28]

Table 10

Sample Characteristics

Pseudonym	Quartile Group	Age	Sex	Military Branch	Years of Service	Years Since Discharge
Gareth	Very High	38	Male	Royal Navy	5	15
Patrick	Very High	48	Male	British Army	3	24
Joshua	Very High	59	Male	British Army	24	19
Violet	High	37	Female	Royal Air Force	6	14
Paul	High	66	Male	Royal Air Force	31	22
Joey	High	60	Male	Royal Navy	40	4
Dave	High	51	Male	British Army	6	14
Mitchell	Low	77	Male	British Army	25	35
Roger	Very Low	56	Male	Royal Navy	6	22
Logan	Very Low	28	Male	British Army	4	1
Grant	Very Low	53	Male	British Army	9	27

All but one of the participants were male and represented a range of ages and years of service within their respective branches. All participants from the *Very high* group met the criteria for PTSD[29]. The average number of years since discharge was 15 years, ranging from 1 year to 35 years. It was aimed to have an even number of participants per quartile. However, for the *low* group, only one participant agreed to be interviewed from the interview pool.

Overview of themes

The analysis identified five overarching themes, with corresponding sub-themes. The thematic map (Figure 3) highlights how the views of each group were represented across the themes. Table 11 presents the individual participants who provided evidence for each of the themes and sub-themes.

[28] See *Extended Results – Interview Sample Demographics* for further details of the interview sample demographics

[29] See *Extended Results – Descriptive Statistics – Interview Sample* for further details of descriptive statistics of the psychometrics for the interview sample

Table 11

Overview of themes across quartile groups

		Very High			High				Low	Very Low		
		Gareth	**Patrick**	**Joshua**	**Paul**	**Dave**	**Violet**	**Joey**	**Mitchell**	**Grant**	**Logan**	**Roger**
Theme	**Sub-theme**											
The need for social connection	*Social media and technology to connect*	✓			✓	✓	✓			✓		
	Importance of physical socialisation	✓	✓	✓				✓				✓
	Access to veteran networks	✓	✓	✓								
Adapting is key	*Changes to coping*	✓	✓	✓			✓				✓	
	Role of routines	✓	✓			✓			✓	✓	✓	
	*Overcoming barriers to being at home**	✓		✓	✓	✓			✓		✓	✓
	*Goal-orientated attitude**	✓		✓						✓		
Managing/overcoming Mental Health Barriers	*Addressing mental health difficulties*	✓		✓	✓		✓					
	Managing ongoing worry		✓				✓		✓		✓	
The military made me	*Military mentality*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Pandemic comparable to time serving	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Civilians in comparison	✓	✓	✓		✓	✓					
Progression of the pandemic*	*Positive from lockdown**	✓								✓	✓	✓
	*Changes to the lockdown experience**	✓	✓	✓			✓	✓	✓		✓	
	*Future outlook**		✓				✓	✓			✓	

*Themes and sub-themes are further discussed in the *Extended Results* section

Figure 3

Thematic map

The themes above describe a narrative whereby veterans appear to move through stages as the pandemic progresses. These stages present new challenges that need to be overcome to achieve a sense of wellbeing as restrictions continue.

The need for social connection.

Initially, social connectedness and remaining connected to others was a fundamental need and aspect of everyday life for some participants, and restrictions (or in some cases complete loss of connection) had negative consequences. To overcome this, participants were forced to find new ways to remain connected.

Social media and technology to connect[30]. For some, technology provided a needed platform for staying in touch with friends, family, and comrades. This came with a level of spontaneity whereby individuals could see comments or posts on social media and have easy access to interact with the person, like or add a comment:

> …being sat at home not being able to do anything and you're on Facebook and then someone pops up from somewhere in your life along the line…sort of that level has been really positive. (Gareth)

Social media could also provide insight into the difficulties of others without the need of physically speaking. Some participants expressed how positive this was as it allowed them to be involved and compassionate towards others; leading them to feel connected within their social world:

> I message people on Facebook I don't see very often, but I always message them if I see something on their Facebook saying, You know, like someone's not well or the daughter's not well or whatever, I'd always message and say, well, you know, sorry to hear or whatever…Obviously, you just stay in touch with people online. (Violet)

This was important for allowing individuals to feel connected to their social circles. Whilst they could not physically see those who support them and they want to support, they still had insight into what is going on in their life.

[30] See Extended Results *Social media and technology to connect* for further information and supportive quotes regarding this theme

One participant expressed how technology was not suited for his needs (connecting with others virtually) and compared this to the expected social norm of accessing social contact online:

> I do get to talk to a few people on there [online games], but it's not the same as actually going out and talking to people if that makes sense. It's the same kind of contact. I mean, I suppose the modern generations, they probably look at that sort of communication as the normal and a friendship, but I don't know. I mean I'm 48 (Patrick)

Importance of physical socialisation[31]. All participants from the *Very* high group identified that having an online or virtual presence had its benefits, but these were not seen as a replacement for face-to-face contact, but some, as a more temporary solution for staying connected. The drastic change from regular contact with friends and family to minimal contact was experienced more prominently by some participants, and whilst this was comparable to the time spent serving, this was not seen as acceptable:

> I mean I would see family and friends, every week. Every Friday we would always go out and meet friends…now it's like being in Alcatraz, just no real freedoms and okay, 20 years ago I was at sea but you still got your freedoms whilst at sea, believe it or not. (Joey)

Physical touch was particularly important for participants across all of the groups as this provided a key aspect of socialising that allowed individuals to bond with one another:

> I suppose the one thing I've missed in this country family wise is a good hug from my daughter…I missed having good hugs from my daughter. I think that's the probably big thing I miss. Yeah, that kind of human contact. (Roger)

An initial difficulty appeared to be the removal of physical contact. Secondary to this, having socially distanced contact but being unable to touch one another appeared to be just as distressing as it presents individuals with something they desperately want but cannot have. This is perhaps a more universal experience for individuals during the pandemic and not just specifically for the veteran population.

[31] See Extended Results *Importance of physical socialisation* for further information and supportive quotes regarding this theme

Access to veteran networks. Participants from the very high group all identified how access to veterans' groups and networks to stay connected was important during the pandemic. When this was taken away, it was evident that individuals felt less connected to their social world; especially if this was limited before the lockdown:

> Because I did have the Veterans Club, you see and that was on the second Sunday of the month. So, I got to go there and got to speak to some veterans and stuff like that, but I don't even have that no more. More major real crappy things for me. (Patrick)

Staying in contact with other veterans was important for these participants, especially when there had been a time when contact had been limited or nil:

> Yeah, well I've got in touch with more people [veterans] who I'd lost touch with and making or restoring links with people I haven't spoken to for over a year or two and things like that. It just gives me some contact with people really. (Joshua)

There was a positive effect for participants who re-connected with veteran friends during the pandemic, and this provided a needed sense of unity, shared experience, and social contact. Similarly, bonds made during military service were portrayed as 'stronger' than civilian bonds and any opportunity to either re-establish these or keep these going was of huge benefit:

> I've reconnected with quite a few of my old naval friends, had a few zoom calls with people that I should have kept in contact with and haven't so much…we sort of bonded together a bit weirdly, and I think that's quite…I've got a few friends with different services, and they've been quite…had similar sort things which I found quite interesting. (Gareth)

Adapting is key

Once the need for social connection was identified, adapting to the effects of the pandemic was a skill that was attempted by participants but was not always successful. Differences were seen depending on the participants access to resources, previous abilities to adapt, and current motivation and drive.

Changes to coping[32]. During the lockdown, participants reported a significant change to the strategies they would use to manage the emotional difficulties related to the pandemic and restrictions (i.e., lack of social contact, managing anxiety/low mood). This was related to pre-existing and newly emerging difficulties. For some, adapting unhealthy strategies in the early stages of lockdown became problematic:

> I probably drank a little bit more than I should have in the first lockdown, but haven't done that this time, and I feel a lot happier…I was having a drink every night. I'd cut the drinks every night in the first lockdown. But now sort of cut that out. (Joshua)

The complete loss of coping strategies was detrimental to some participants, who struggled to adapt to this. This loss of strategy appeared to have not only some mental health implications but also an impact on the individual's physical health and wellbeing:

> I've been running a gym for about 15 years now, it was an old steel works gym that's been absolutely devastating, so it's the first time since I was 16 when I've not been hospitalised that I've not trained a minimum of three times a week…I'm one of those who if I don't do too much, put a little bit of midriff on you know, and so it's just horrendous. It's the worst ever (Joey)

This was in situations whereby the restrictions had played a role in accessing popular means of coping (such as the gym and sport/exercise). Exercising was a popular coping strategy among the participants. Whilst some were able to adapt to this through home gyms and home exercising, others struggled as public facilities were all they could practically use:

> You see one of the biggest things that were actually keeping me going and making me cope better than I am now, was the gym. Because they shut the damn things … one of the problems with my mental health conditions is I need consistency…so I'm basically locked away, not able to do anything. (Patrick)

Role of Routines. Routine was an important aspect of adapting for the participants, and often a lack of routine and a level of consistency made it difficult for individuals to manage:

[32] See Extended Results *Changes to coping* for further information and supportive quotes regarding this theme

> I think the lack of routine…I quite like my routine structure and the fact that it isn't there at the minute and I can't do what I like to do. I can't go to the gym. I can't play rugby (Gareth)

Whilst participants across the quartile groups voiced the difficulties with losing a long-standing routine, those from the very high group expressed more pronounced difficulties, often feeling destabilised and unable to regain a new focus:

> I've been majorly affected. I was at the point I got to, I was a lot fitter and I was not coping but being able to get by day to day, I had a routine, whereas now I'm struggling majorly to get by every day. I think that's more covid stuff. (Patrick)

In this case, an effort was insufficient for establishing a new routine and participants were left feeling lost and unable to cope.

For those who reported poorer mental health and social difficulties (very low and low quartile groups), routines were easily re-established and adapted to suit their environment:

> I've still got to work. I work in an office where I'm the only person in the office. So, my week is, I get up, I go to work, I come home, I do my rehabilitation exercises, I go to bed to watch TV, wind down, go to bed. The next day, repeat. At the weekend I've got shopping and visit my mum and then football and that's it. Same every week. (Dave)

This provided some much-needed consistency and was reflective of time within the military where adaption was necessary to not only stay well and motivated but also get from one day to the next:

> …well actually it's very strange that even with this lockdown I fall into a routine. I mean, routine in my mind is good because it makes people feel psychologically safe. They don't have to think about anything... So, I have a routine where I get up, I do my exercises on certain days, I swam when I could swim….So I am falling into a routine, basically. (Mitchell)

Managing/overcoming mental health barriers

Alongside attempting to adapt to the restrictions, mental health was a prominent area that required participants to recognise if an intervention was necessary (particularly for the

very high and *high* groups). These groups identified challenges with managing their mood and anxiety, as well as identify ways of overcoming these barriers.

Addressing mental health difficulties. Sharing feelings with others was seen as a positive means of managing low mood for some and those who were confident in their ability to do so reported fewer negative repercussions of admitting that they were struggling at times:

> So I have safety, not safety networks, but there are a few friends who can read me like a book so they know…so I try and, even if I'm not making sense I try and speak about how I'm feeling to my girlfriend or whoever, you know, my nan, my grandad, my mum, whatever, you know, just try to verbalise… (Gareth)

This was particularly helpful for those who could become fixated on their difficulties rather than focusing on other aspects of the situations (e.g. positive things going on):

> I concentrate on really… on one little tiny little bit when I should be looking at the bigger picture. So, I now sort of think, I've got friends I can phone now, and I find something to do. (Joshua)

In contrast, some participants reported a 'just fix it' mentality, whereby they would simply continue as if they are not struggling, in the hope that things would resolve themselves eventually:

> Mental health in the military is you can get on and do it. It's difficult, but if you give up then you have failed, you've lost…If you give up you've failed. I did 30 odd years in the military, and I learnt from basic training, that you are a team. Can you work together? And if you don't work together, you're all going to die. That was the bottom line (Paul)

A sense of 'losing' to mental health could present further difficulties with participants as it created expectations around how they should be managing and what it suggests about their abilities if they cannot do so sufficiently. Support and strength in teamwork appeared to be an important component for addressing some of these difficulties., and this was related by participants to their military experience.

With one participant, mental health was not something they had considered a difficulty or one which had even come to their attention. Instead, they reflected upon how the pandemic has not changed their behaviours or personality:

> I'm still as irascible and confrontational and judgmental as I've always been. So, I do know my faults. No mental health issues here (Mitchell)

Managing ongoing worry. Ongoing worries were something that several participants reported experiencing during the lockdown and this would often take the form of something that has power over their lives.

For those who were able to identify that they were worrying about things that were out of their control, they were then able to better rationalise their situation and make judgements about what they could realistically achieve:

> So, at the same time, I am worried about it, but I can't be a prisoner as well. You get what I mean? I need to be able to go to the shop. I need to be able to go for a walk and you know you need to be able to do that, but I think… and also you get, just get stuck in a rut sometimes. (Violet)

Equally, it was described as acceptable to have moments where you did struggle, and this did not mean that worrying was going to become problematic. However, it was important for the individual to monitor this to ensure that a balance is struck.

Some participants expressed their reservations of things not getting better in the future and achieving a sense of normality:

> I think it's going to take a long time to get back anywhere near a sense of normality. (Joshua)

In contrast, one participant did not see worry as something even worth considering within the pandemic:

> What is the point of worrying about something that I can't influence? There is no point. There is none. There is absolutely no point. (Roger)

The military made me

Once the process of adapting had begun, individuals became more aware of their social identity, how this fit within the pandemic and subsequently affect their behaviours. All

eleven participants cited how serving in the military contributed towards who they were as a person, how they function post-discharge and how this contributed towards their everyday living, including their approach to the pandemic.

Military mentality[33]. Participants described a mentality or 'state of mind' when explaining their experiences through the pandemic. This mindset was often positive when faced with adversity or challenges due to restrictions:

> My mentality is everything happens for the best. No matter what happens to you, this is happening for the best because it can only get better do you know what I mean? Don't sit waiting for it to go away. Just make it up and make something happen and be positive. (Grant)

With the frame of mind came a drive and a need to see the positives within the future. This was evident across all participants who presented with a wide range of psychological, social, and trauma-related difficulties. Whilst the present may not have been desirable or pleasant, looking to the future was something that was engrained from time spent in the military and this was important for continuing to move forward:

> I tend to look forward. Certainly, hardly ever look back unless there's a lesson somewhere. Now I'm a forward-thinking person. I think I feel and need to have… I feel better if I know that during the day I've accomplished. (Mitchell)

This 'way of being' would directly stem from service within the military and influence not only the participants' attitudes, but also the way they behaved, managed, coped, and functioning as the pandemic progressed:

> Yeah, I mean you know it's that's deeply ingrained in you, that's the way you treat everything. So, you know what? What can I influence? Somethings but you know I can't influence everything…I think a lot of my adult behaviours and attitudes do stem from my time in the navy. I know they pretty much formulated a big chunk of my character in there. You know, you see the adverts invite…. I was born in so and so but grew up in the Navy or whatever. I think there's a lot of truth behind that. (Roger)

[33] See Extended Results *Military Mentality* for further information and supportive quotes regarding this theme

Pandemic comparable to time serving [34]. Across all participants, there was an overwhelming consensus that time serving within the military was significantly worse than any experience during the pandemic and the lockdowns. This was regardless of whether participants were significantly struggling with their mental health or were experiencing any trauma-related symptoms. Whilst being confined to their homes during lockdown was a challenge for some, the experience and difficulties related to serving were greater:

> I spent six weeks in a fucking trench [laughs]. It wasn't very big. It wasn't as big as the flat you know what I mean? …so my flat is just like being in a in a box. It's just one of them things that I've got to make…I've got to have a positive outcome of this situation. (Grant)

Despite being restricted to their own homes, and in some cases being isolated from friends, family and regular social contact, participants would regularly compare aspects of this to their own military experience to gain perspective on their situation and remind themselves that they were able to cope and that the military had prepared them well for this:

> I've been on a metal tin can with 150 lads. I've been through and put on there. It ain't ideal but it aint the end of the world. I mean when I served, you were lucky to get a couple of emails, you know, maybe the odd five-minute phone call if you didn't break up. Now you've got so much Internet access and supply, why can't people just suck it up. I know it's not ideal, but yeah… (Gareth)

Some participants found themselves continuing military habits to manage the rules and restrictions imposed by the government in the form of mask-wearing.

> I think I sort of view the masks as a uniform sort of thing. So, getting out of my van now, especially since the latest lockdown, it's the mask on before I get out of the van or as I'm getting out of the van, just like putting my beret on. (Gareth)

This allowed for new routines to be developed fairly quickly and the use of safety measures to be followed with ease. Given that within the military this was essential for staying alive, this proved a useful transferrable mindset for the participants during a time of uncertainly and frustration.

[34] See Extended Results *Pandemic comparable to time serving* for further information and supportive quotes regarding this theme

Civilians in comparison [35]. There was evident frustration from some participants around how serious civilians were taking the pandemic and the restrictions:

> Yeah, some civilians don't seem to understand it and they seem to have the view that they should be allowed to do what they like; you know. I don't agree with that because just doing what you like creates confrontation because when you're doing what you want all the time, you're not thinking of others… (Patrick)

Some participants found it difficult to empathise with civilians who struggled with the restrictions or chose not to follow them as they had their own similar experiences in the military, and these were markedly worse:

> I'm just like why doesn't everyone just put masks on? People say "oh but I've got asthma and it makes me nervous". Hang on, I'll give you something else. Here's an army respirator. Wear that instead love, however, you'll lose 20% of your oxygen intake. You'll soon quickly prefer to wear a paper mask if you gotta wear one of them. (Dave)

However, some participants could understand how civilians may not be used to these kinds of restrictions and this allowed them to reflect on what they had learnt and how useful that has been during the lockdown:

> So, I've seen those aspects of the Navy and I can understand and appreciate why people feel trapped. I don't feel I have been trapped so much as when I've been on deployment because I've had my home comforts because I'm in my home environment. I'm in my safe place. (Gareth)

Summary

From the results, we can see a clear process whereby the veterans have progressed from the start of the pandemic (the first UK lockdown) up until the stage of interviews (the third lockdown). Initially, a social connection was seen as a need that was taken away and had to be addressed to maintain important social ties and bonding. Veterans were then required to begin adapting to their situation, whilst also considering the emergence of or continuation of mental health-related difficulties. A strong military mentality was evident within the participants, and this influenced not only their behaviours but also how they viewed others and the overall managing of the pandemic. By the third lockdown, participants

[35] See Extended Results *Civilians in comparison* for further information and supportive quotes regarding this theme

had reached a point whereby they could reflect on their experiences and begin to make judgements about the future and how their life would be post-pandemic.

A further main theme (*Progression of the pandemic*) and several sub-themes (*Overcoming Barriers to being at home* and *Goal-orientated attitude*) have not been included in the journal paper as they either related more to the general population (rather than veteran-specific) or they were not as salient as other themes.[36]

Discussion

This study intended to achieve three primary aims through the use of a mixed-methods sequential explanatory design: (1) to investigate the relationship between coping, depression, anxiety, traumatic stress, coronavirus anxiety, and social connectedness, (2) to use the results from the survey to inform qualitative data collection and recruitment to interviews, and (3) to gain an experiential understanding of the impact that COVID restrictions from the veteran perspective. Findings confirmed evidence of links between social connectedness, depression, anxiety and traumatic stress. Social connectedness was highlighted as an important aspect of everyday living for participants and restrictions impacted upon this, leading to the need to adapt their context. For some, mental health created barriers, but for most individuals these were minimum. A strong military identity was seen across all participants, with this mentality contributing towards their pandemic experience and how it was managed moving forward[37].

Within the literature, it has been highlighted, the potentially detrimental impact restrictions can have upon the veteran population, with fewer opportunities to connect and bond with others leading to more pervasive symptoms of anxiety and depression (Wilkins et al., 2020). Prevalence rates for veterans indicate that PTSD is the most commonly endorsed mental health difficulty, with this more often comorbid with depression and anxiety-related difficulties (Murphy et al., 2019). This was not substantially evident through the psychometric scores in this study, with the data displaying a non-normal distribution (with a skew towards lower scores across clinical measures). These inferences can therefore only be made about a small subsection of the population. Whilst the majority of the participants failed to reach thresholds for significant mental health difficulties or PTSD symptomology, this does not imply that veterans have not faced difficulties during this pandemic. Instead, it

[36] See *Extended Results* for further analysis of these themes and sub-themes

[37] See *Extended Discussion Further Findings* for further discussion regarding the findings of this research

suggests that only a small number of individuals showed mental health difficulties from a reasonably represented sample of veterans.

The lockdown restrictions within the UK led to veterans across the country finding themselves isolated and without regular social contact. This extended period alone perhaps provided time for individuals to ruminate and reflect upon previous traumatic events. Those who had already developed strong social networks will have had these significantly reduced (if not eliminated) and this will have impacted upon their wellbeing and everyday functioning. Similarly, the 'stay-at-home' orders placed significant limitations upon what activities individuals could do and where they could go. This restriction may have extinguished useful and helpful social contacts for individuals managing symptoms of PTSD (Austin et al., 2020). It could therefore be suggested that opportunities to promote social connectedness are important, not only for maintaining mental wellbeing but also for keeping individuals with PTSD -related backgrounds stable. This is supportive of Polyvagal theory (Porges, 2018), in that social engagement is an essential component for achieving interpersonal connection, allowing individuals to feel safe, and navigate through autonomic states (Hanscom et al., 2020).

A core finding from this study involves re-establishing military identity, and the role it plays across all branches of the UK military. Military identity is well researched in veteran literature, documenting how transitioning from active service into civilian life can pose specific difficulties around the loss of identity, adjustment and purpose (Romaniuk & Kidd, 2018). For some, this military identity can be a protective factor for navigating everyday life, increasing hardiness to guard against PTSD (Escolas et al., 2013) as well as provide them with skills, competence and expertise to navigate a range of social-civilian situations (Woodward & Neil Jenkings, 2011). Muldoon (2020) also suggested how experiences of the pandemic can be shared within social groups as an identity-specific and collective entity. Participants talked about how their military experience was a fundamental part of who they were and how they managed through the pandemic. This mentality appeared to be a mechanism that mobilised individuals to enact change within their lives. The pandemic was viewed as incomparable to the previous service and a clear separation was made between veterans' experience of the pandemic and those of civilians. For some individuals, this mentality allowed them to adapt when restrictions became repetitive and difficult to manage. This adaption involved assessing coping strategies, tackling mental health difficulties, remaining connected with those close to them, and beginning to think and plan for the future.

For others, this mentality was tapped into much later into the lockdowns and allowed individuals to mobilise and avoid becoming less socially engaged and more active within their everyday functioning. Whilst all participants had a perceived military mentality, if they were unable to utilise this to make significant changes in their life, then they appeared to have a negative outlook as well as negative outcomes.

The pandemic has had some effect on the UK population, but for specific cross-sections, this impact is unclear. This study explored the specific impact amongst veterans across all branches of the UK military. The findings from this shed light upon the pivotal role of social identity (Tajfel, 1978) and how this can influence future outcomes for individuals not only during COVID restrictions but equally during situations whereby social connections are diminished, coping strategies are depleted and mental health difficulties are more likely to develop. Viewing military identity as a mechanism for change and a significant strength for this population would allow services to engage with veterans more successfully. As a group, military personnel are more likely to present to veteran-specific services within the NHS, with common mental health difficulties and PTSD symptomology (Fraser, 2017; Mellotte et al., 2017). Therefore, understanding individuals through their military identity and how this shapes their emotions and behaviours during times of crisis and social restrictions would allow support to be given, whilst minimising potential barriers to engagement[38].

It is believed that this study is the first to be carried out within the UK to explore the strengths and difficulties faced by veterans across all branches of the military during the pandemic. The use of a mixed-methods design allowed for the spontaneous discovery of new and insightful findings, such as the potential links between traumatic stress and social connectedness, and threat system activation outlined within the polyvagal theory (Porges, 2018). Further to this, social identity theory and the role of specific military identity and 'belonging' has long been present within the literature as a means of understanding how this sub-group fits within the wider population (Olenick et al., 2015). This research has added a new perspective around military mentality and its ability to mobilise veterans during times of crisis, restriction, and uncertainty, and therefore offers an interesting addition to the literature[39].

[38] See *Extended Discussion Contribution to the literature* for further discussion regarding how the findings contribute to the clinical psychology literature

[39] See *Extended Discussion Clinical/Military Implications* for further discussion regarding the implications of this research

However, as with all research, there are limitations to the discovery of findings as well as their application[40]. The key features of quality mixed methods research are often lacking within the literature (Zhang & Creswell, 2013); particularly the integration of quantitative and qualitative methodologies. The current study required substantial planning and decisions around data collection, sample selection and data integration. Connecting two methodologies can be a challenge within research (Creswell, Shope, Plano Clark, & Green, 2006) and this was evident through the complex selection of the interview sample. It is acknowledged that from the four quartile interview groups, these were not equally represented, with the *low* group having only one individual. This could be a reflection upon the robustness of the sampling strategy; however it should be noted that a significant pool of individuals was contacted for an interview for this quartile, but unfortunately, they were either unable to participate or did not respond. This is a common difficulty within research as well as a point of reflection for the future selection of interviewees.

This research has identified the potential impact of the COVID-19 pandemic on UK veterans; however, the pandemic is currently ongoing and therefore there are still unanswered questions around how veterans not only see their future but the potential outcomes post-pandemic[41]. It would be worthwhile once a significant period has passed, following the final official UK lockdown, to explore not only the potential difficulties that the population are still facing but also if individuals can re-adapt to 'normal' life post-pandemic. For those who display difficulties with this, it will pose important questions around supporting veterans within services moving forward, particularly with an anticipated increase in the number of individuals in the general population accessing services in the coming years (Moreno et al., 2020)

This study provides an insight into the potential positive and negative impact upon veterans during the UK pandemic. Findings suggest that a previously adopted 'military mentality' may play a pivotal role for future functioning as well as how individuals begin to resume everyday life once restrictions are lifted. Social connectedness remains an important aspect of mental wellbeing and addressing this early can lessen the likelihood of developing mental health difficulties. Equally, veterans are shown to adapt universally, like the general

[40] See *Extended Discussion Strengths and Limitations* for further discussion regarding the strengths and limitations of this research

[41] See *Extended Discussion Further Research* for further discussion regarding future research

population, suggesting that aspects of the lockdown are experienced within the wider population. The chosen methodology presents challenges for generalising findings, but results can be used in an informative way to contribute towards future research and support veterans within healthcare services as the COVID-19 pandemic comes to an end.

References

Ahern, J., Worthen, M., Masters, J., Lippman, S. A., Ozer, E. J., & Moos, R. (2015). The challenges of Afghanistan and Iraq veterans' transition from military to civilian life and approaches to reconnection. *Plos One, 10*(7), e0128599. http://dx.doi.org/10.1371/journal.pone.0128599

Althouse, A. D. (2016). Adjust for multiple comparisons? It's not that simple. *The Annals of thoracic surgery, 101*(5), 1644-1645. http://dx.doi.org/10.1016/j.athoracsur.2015.11.024

Austin, G., Calvert, T., Fasi, N., Fuimaono, R., Galt, T., Jackson, S., Lepaio, L., Liu, B., Ritchie, D., & Theis, N. (2020). Soldiering on only goes so far: How a qualitative study on Veteran loneliness in New Zealand influenced that support during COVID-19 lockdown. *Journal of Military, Veteran and Family Health, 6*(S2), 60-69. http://dx.doi.org/10.3138/jmvfh-CO19-007

Bowen, P., Rose, R., & Pilkington, A. (2017). Mixed methods-theory and practice. Sequential, explanatory approach. *International Journal of Quantitative and Qualitative Research Methods, 5*(2), 10-27.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101. http://dx.doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589-597. http://dx.doi.org/10.1080/2159676X.2019.1628806

Bridgland, V. M., Moeck, E. K., Green, D. M., Swain, T. L., Nayda, D. M., Matson, L. A., Hutchison, N. P., & Takarangi, M. K. (2021). Why the COVID-19 pandemic is a

traumatic stressor. *Plos One, 16*(1), e0240146. http://dx.doi.org/10.1371/journal.pone.0240146

Carver, C. S. (1997). You want to measure coping but your protocol'too long: Consider the brief cope. *International journal of behavioral medicine, 4*(1), 92-100. http://dx.doi.org/10.1207/s15327558ijbm0401_6

Creswell, J. W., Shope, R., Plano Clark, V. L., & Green, D. O. (2006). How interpretive qualitative research extends mixed methods research. *Research in the Schools*, 13(1), 1-11.

Escolas, S. M., Pitts, B. L., Safer, M. A., & Bartone, P. T. (2013). The protective value of hardiness on military posttraumatic stress symptoms. *Military Psychology, 25*(2), 116-123. http://dx.doi.org/10.1037/h0094953

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior research methods, 41*(4), 1149-1160. http://dx.doi.org/10.3758/BRM.41.4.1149

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International journal of qualitative methods, 5*(1), 80-92. http://dx.doi.org/10.1177/160940690600500107

Fiorillo, A., & Gorwood, P. (2020). The consequences of the COVID-19 pandemic on mental health and implications for clinical practice. *European Psychiatry, 63*(1). http://dx.doi.org/10.1192/j.eurpsy.2020.35

Fisher, L. B., Overholser, J. C., Ridley, J., Braden, A., & Rosoff, C. (2015). From the outside looking in: Sense of belonging, depression, and suicide risk. *Psychiatry, 78*(1), 29-41. http://dx.doi.org/ 10.1080/00332747.2015.1015867

Fraser, E. (2017). Military veterans' experiences of NHS mental health services. *Journal of Public Mental Health*. http://dx.doi.org/10.1108/JPMH-06-2016-0028

Groarke, J. M., Berry, E., Graham-Wisener, L., McKenna-Plumley, P. E., McGlinchey, E., & Armour, C. (2020). Loneliness in the UK during the COVID-19 pandemic: Cross-sectional results from the COVID-19 Psychological Wellbeing Study. *Plos One, 15*(9), e0239698. http://dx.doi.org/10.1371/journal.pone.0239698

Hanscom, D., Clawson, D. R., Porges, S. W., Bunnage, R., Aria, L., Lederman, S., Taylor, J., & Carter, C. S. (2020). Polyvagal and global cytokine theory of safety and threat Covid-19–plan B. *SciMedicine Journal, 2*, 9-27. http://dx.doi.org/10.28991/SciMedJ-2020-02-SI-2

Haslam, C., Cruwys, T., Haslam, S. A., & Jetten, J. (2015). Social connectedness and health. *Encyclopaedia of geropsychology, 2015*, 46-41. http://dx.doi.org/10.1007/978-981-287-080-3_46-1

Held, P., Klassen, B. J., Coleman, J. A., Thompson, K., Rydberg, T. S., & Van Horn, R. (2020). Delivering Intensive PTSD Treatment Virtually: The Development of a 2-Week Intensive Cognitive Processing Therapy–Based Program in Response to COVID-19. *Cognitive and Behavioral Practice*. http://dx.doi.org/ 10.1016/j.cbpra.2020.09.002

Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., Ballard, C., Christensen, H., Silver, R. C., & Everall, I. (2020). Multidisciplinary research

priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*. http://dx.doi.org/10.1016/S2215-0366(20)30168-1

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice. *Field Methods, 18*(1), 3-20. https://doi.org/10.1177/1525822x05282260

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613. http://dx.doi.org/10.1046/j.1525-1497.2001.016009606.x

Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. *Journal of Counseling Psychology, 48*(3), 310. http://dx.doi.org/ 10.1037/0022-0167.48.3.310

Lee, S. A. (2020). Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety. *Death Studies, 44*(7), 393-401.

Lee, S. A., Mathis, A. A., Jobe, M. C., & Pappalardo, E. A. (2020). Clinically significant fear and anxiety of COVID-19: A psychometric examination of the Coronavirus Anxiety Scale. *Psychiatry Research, 290*, 113112. http://dx.doi.org/ 10.1080/07481187.2020.1748481

Mellotte, H., Murphy, D., Rafferty, L., & Greenberg, N. (2017). Pathways into mental health care for UK veterans: a qualitative study. *European Journal of Psychotraumatology, 8*(1), 1389207. http://dx.doi.org/10.1080/20008198.2017.1389207

Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., Cannon, M., Correll, C. U., Byrne, L., & Carr, S. (2020). How mental health care should change as

a consequence of the COVID-19 pandemic. *The Lancet Psychiatry*. http://dx.doi.org/ 10.1016/S2215-0366(20)30307-2

Moring, J. C., Dondanville, K. A., Fina, B. A., Hassija, C., Chard, K., Monson, C., LoSavio, S. T., Wells, S. Y., Morland, L. A., & Kaysen, D. (2020). Cognitive processing therapy for posttraumatic stress disorder via telehealth: Practical considerations during the COVID-19 pandemic. *Journal of Traumatic Stress, 33*(4), 371-379. http://dx.doi.org/ http://dx.doi.org/10.1002/jts.22544

Muldoon, O. (2020). Collective trauma. *Together apart: The psychology of COVID, 19*, 84-89.

Murphy, D., Ashwick, R., Palmer, E., & Busuttil, W. (2019). Describing the profile of a population of UK veterans seeking support for mental health difficulties. *Journal of Mental Health, 28*(6), 654-661. http://dx.doi.org/10.1080/09638237.2017.1385739

Murphy, D., Williamson, C., Baumann, J., Busuttil, W., & Fear, N. (2020). Exploring the impact of COVID-19 and restrictions to daily living as a result of social distancing within veterans with pre-existing mental health difficulties. *BMJ Mil Health*. http://dx.doi.org/ 10.1136/bmjmilitary-2020-001622

Nindl, B. C., Billing, D. C., Drain, J. R., Beckner, M. E., Greeves, J., Groeller, H., Teien, H. K., Marcora, S., Moffitt, A., & Reilly, T. (2018). Perspectives on resilience for military readiness and preparedness: report of an international military physiology roundtable. *Journal of science and medicine in sport, 21*(11), 1116-1124. http://dx.doi.org/10.1016/j.jsams.2018.05.005

Olenick, M., Flowers, M., & Diaz, V. J. (2015). US veterans and their unique issues: enhancing health care professional awareness. *Advances in medical education and practice, 6*, 635-639. http://dx.doi.org/ 10.2147/AMEP.S89479

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, inc.

Porges, S. W. (2018). Polyvagal theory: A primer. *Clinical applications of the polyvagal theory: The emergence of polyvagal-informed therapies*, 50-69.

Porges, S. W. (2020). The COVID-19 Pandemic is a paradoxical challenge to our nervous system: a Polyvagal Perspective. *Clinical Neuropsychiatry, 17*(2), 135-138. http://dx.doi.org/ 10.36131/CN20200220

Porges, S. W., & Dana, D. (2018). *Clinical Applications of the Polyvagal Theory: The Emergence of Polyvagal-Informed Therapies (Norton Series on Interpersonal Neurobiology)*. WW Norton & Company.

Rice, V. J., Overby, C., Boykin, G., Jeter, A., & Villarreal, J. (2014). How do I handle my life now? Coping and the post-traumatic stress disorder checklist-military version. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 58*(1), 1252-1256. http://dx.doi.org/ 10.1177/1541931214581261

Romaniuk, M., & Kidd, C. (2018). The psychological adjustment experience of reintegration following discharge from military service: A systemic review. *Journal of Military and Veterans Health, 26*(2), 60-73.

Schimmenti, A., Billieux, J., & Starcevic, V. (2020). The four horsemen of fear: An integrated model of understanding fear experiences during the COVID-19 pandemic. *Clinical Neuropsychiatry, 17*(2), 41-45. http://dx.doi.org/ 10.36131/CN20200202

Smith, R. T., & True, G. (2014). Warring identities: Identity conflict and the mental distress of American veterans of the wars in Iraq and Afghanistan. *Society and mental Health, 4*(2), 147-161. http://dx.doi.org/10.1177/2156869313512212

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092-1097. https://dx.doi.org/10.1001/archinte.166.10.1092

Sullivan, G. M., & Feinn, R. (2012). Using effect size—or why the P-value is not enough. *Journal of graduate medical education, 4*(3), 279-282. http:dx.doi.org/10.4300/JGME-D-12-00156.1

Teo, A. R., Marsh, H. E., Forsberg, C. W., Nicolaidis, C., Chen, J. I., Newsom, J., Saha, S., & Dobscha, S. K. (2018). Loneliness is closely associated with depression outcomes and suicidal ideation among military veterans in primary care. *Journal of Affective Disorders, 230*, 42-49. http://dx.doi.org/10.1016/j.jad.2018.01.003

Wilkins, S. S., Melrose, R. J., Hall, K. S., Blanchard, E., Castle, S. C., Kopp, T., Katzel, L. I., Holder, A., Alexander, N., & McDonald, M. K. (2020). PTSD Improvement Associated with Social Connectedness in Gerofit Veterans Exercise Program. *Journal of the American Geriatrics Society*, 69(4), 1045-1050. http://dx.doi.org/ 10.1111/jgs.16973

Williamson, V., Stevelink, S. A., & Greenberg, N. (2018). Occupational moral injury and mental health: systematic review and meta-analysis. *The British Journal of Psychiatry, 212*(6), 339-346. http://dx.doi.org/10.1192/bjp.2018.55

Woodward, R., & Neil Jenkings, K. (2011). Military identities in the situated accounts of British military personnel. *Sociology, 45*(2), 252-268. http://dx.doi.org/10.1177/0038038510394016

Zhang, W., & Creswell, J. (2013). The use of "mixing" procedure of mixed methods in health services research. Medical care, 51(8), e51-e57. http://dx.doi.org/10.1097/MLR.0b013e31824642fd

EXTENDED PAPER

Extended Background

This section outlines the literature around factors that affect the veteran population, including social connectedness, anxiety, depression, and post-traumatic stress disorder. It will also explore how the military functions as a culture and individuals develop identities related to this post-discharge. Theories around polyvagal and social identity will be discussed as well as ways they can be applied to the veteran population. Finally, it will offer a rationale for the study and further detail the research aims.

Military Culture

Culture is a term that can be described in several ways and continues to be explored in depth within literature surrounding identity and belonging to social groups. Avruch (1998) identified culture to be defined in the following way:

> Culture consists of the derivatives of experience, more or less organized, learned or created by the individuals of a population, including those images or encodements and their interpretations (meanings) transmitted from past generations, from contemporaries, or formed by individuals themselves. (p.17)

Whilst individuals who enrol into the military come from a range of varying backgrounds, they're then assimilated into a new shared culture of the military. Van Gennep (2019) describes three stages by which individuals move from one cultural identity to another: separation, transition, and incorporation. Separation involves removing an individual from their usual social life and introducing new customs and social structures. This stage is often described as 'detached' in that the former self is let go to make way for the new self. This is followed by transition, which is the period whereby an individual is between two cultures and is working toward the assimilation of the new culture through the discovery of new social norms. By the incorporation stage, individuals are fully immersed within their new culture, and re-enter society assuming their new identity.

Psychological and sociological literature has extensively outlined the transformational nature of serving in the military (Smith & True, 2014; Woodward & Jenkings, 2011). Military culture is learnt initially through basic training, whereby the original civilian identity is transformed into a military identity (Redmond et al., 2015). Whilst there are convincing arguments for the theoretical existence of military culture and a subsequent military identity, measurement of this construct continues to develop (Smith & True, 2014). For instance, it is still unclear as to which aspects of military identity are most important for understanding

veterans as a population (Brewin et al., 2011). Veteran culture is heavily influenced by military culture, in that they have the shared defining feature of past military service (Harding, 2017).

Military training primarily aims to socialize individuals to a culture of "warrior masculinity", in that collective identity and social togetherness are valued, alongside traits of strength and an ability to overcome adversity (Hockey & Higate, 2003; Shields, 2016). This collective identity is a vital process for military individuals as it leads to a strong military culture; viewing others serving alongside as family (Smith & True, 2014). From this, beliefs, rituals, behaviours and attitudes are developed that continue to exist long after individuals are discharged (Meyer et al., 2016).

Social identity theory

Social identity theory (Tajfel, 1978) originated from the conviction that group membership can help people to instil meaning in social situations. Through group membership, individuals can define who they are and how they relate to others. Social identity theory is prominent within psychology for explaining the role of identity within society. It addresses the ways that identity within social situations can affect the behaviours and attitudes of individuals within and outside groups. Social identity is seen as most influential when membership to a particular group is viewed as central to the individuals' existence (Turner et al., 1987). A consequence of this is increased self-esteem for individuals; further allowing them to sustain this social identity (Golec de Zavala et al., 2019). Whilst identity theory can help understand collective groups, there is less focus upon individual autonomy and ways in which individual identity can be influential (Postmes & Jetten, 2007). Individuals can hold single identities as well as multiple identities (Deaux, 1996), however, this can pose a challenge, such as never fully belonging or integrating to one exclusively. This is known as intersectionality, whereby identities converge to create new ones which carry their specific meaning and lived experience (Cole, 2009; Crenshaw, 2018). These identities are not added together, but instead are a collective, representing the relationship and interactions of multiple systems (Zerai, 2000). Intersectionality views an individual's experience through multiple, layered identities, that are developed not only from social interactions but historical foundations and the operation of structured power (Dill et al., 2007). Veterans can similarly be viewed as holding a previous military identity, alongside a

civilian identity following discharge from service; allowing for the membership of multiple social groups.

Interestingly, individuals can not only strongly identify with social groups, but the groups themselves can become prone to believing that they are superior to others (Brown, 2000). This is evident even when there are no obvious external causes for this. Not only can individuals display discrimination towards other groups, but this form of 'in-group bias' can make members feel better about themselves and their sense of belonging to a particular group or identity (Rubin & Hewstone, 1998). Social identity theory is often used to describe the occurrence of in-group biases without identifying any objective causes or contributing factors; making it more difficult to explore specific causal or contributory aspects of identity formation, function and role within sub-groups of the wider population.

Societal differences between veterans and civilians are often described as an "us" and "them" culture (Clarke, 2008) in that veterans prefer to fully identify with their military experience, even post-discharge. During the pandemic, blanket restrictions were placed upon individuals within the UK. However, it is unclear how this is managed for veterans who not only hold different views from their military experience, but also judgements towards others (including civilians) who act, think, and feel differently from them, despite having similar global restrictions. Van Zomeren et al. (2008) argued that a stronger sense of social identity may relate to a stronger sense of efficacy as well as the perception of differences and injustices between other social groups.

Military Identity

Military identity can be understood and described as the combined theoretical view from social identity theory, alongside specific military cultural components. Military personnel can experience significant physical and psychological difficulties as a result of conflict whilst serving (Vogt, 2011). As a result, this can later influence personal identification with a military identity. Veterans are seen to adapt behaviours and language to align with this identity, much like ethnic identities (Zirker et al., 2008). The military is seen to prepare individuals to manage stressful events such as war and with this comes coping strategies and skills. Problem-solving skills are often consistent with the military as well as solution-focused approaches, synonymous with the early stages of military training (Tenhula et al., 2014). The idea that military personnel must adapt and overcome challenging situations and obstacles before them are often portrayed as part of an overall mentality, in that these

skills are not just transferable into civilian life, but are skills not seen by others from another social group.

Differences between military individuals and civilians can present as both a strength and limitation to their functioning. Whilst the military provides connection and a sense of belonging that is important for wellbeing, veterans can become detached from the civilian identity (Jung & Hecht, 2004). As this gap increases, veterans can become more socially withdrawn and less communicative, with increased anxiety and depression (Fried et al., 2017). For some, restrictions to social contact may have led to negative outcomes, with individuals perpetuating an 'us and them' divide, which may continue once lockdown has lifted. Muldoon (2020) suggested that whilst experiences of the COVID-19 pandemic will vary across social groups, aspects may be shared amongst members as a collective experience, both positively and negatively.

Coronavirus Anxiety

Research on coronavirus anxiety or 'coronaphobia' has begun to identify the potential impact the pandemic can have upon individuals; triggering physiological symptoms, distressing thoughts, or beliefs around information related to the pandemic (Evren et al., 2020). Increased depression, hopelessness, and generalised anxiety are strongly associated with coronaphobia (Lee, Jobe, & Mathis, 2020), with an increase in cases of suicidality beginning to emerge (Mamun & Griffiths, 2020).

The use and inclusion of instruments to measure coronaphobia, such as the Coronavirus Anxiety Scale (Lee, 2020) are beginning to demonstrate how the psychological well-being and mental health of individuals are affected by the pandemic (Lee, Jobe, Mathis, & Gibbons, 2020). Whilst adhering to advice and information related to COVID-19 may be beneficial to some individuals, it has been suggested that excessive attention can lead to maladaptive behaviours (Taylor, 2019). This is further perpetuated through exposure to media coverage; leading to increased fear and apprehension (Kumar & Somani, 2020). Before the pandemic, has been well established that there are links between hypochondriasis and anxiety; leading in some cases to poor health and wellbeing outcomes during infectious disease outbreaks (Pappas et al., 2009). It could be argued that physical health was prioritised during the early stages of the pandemic, and as a result, the mental health needs of the general population, as well as sub-groups remain unclear.

Veteran Mental health and Coping

Worldwide disasters and crises such as pandemics are known to result in increased rates of PTSD, depression, anxiety and distress (Galea et al., 2020). The veteran population is believed to have higher rates of pre-existing mental health difficulties and psychological stressors compared to civilians (Bruce, 2010). There are concerns that the veteran population may be susceptible to the COVID-19 restrictions, with pre-existing difficulties becoming vulnerable to long-term mental health sequelae (Ramchand et al., 2020). There is currently limited research into the potential impact of the pandemic on veterans' mental health, including those with pre-existing conditions. A study by Asmundson et al. (2020) found that those with anxiety-related difficulties were at higher risk of experiencing psychological distress as the pandemic progressed. Similarly, Mahar et al. (2021) found that whilst veterans reports of mental health symptoms were similar to the general population during the pandemic, there was a need to understand the longitudinal impacts on physical and mental health. Management of mental health was previously a fine balance between providing adequate services for veterans to access as well as effectively engaging them in intervention and management. The pandemic has brought about new barriers to managing and coping with these mental health difficulties, often leaving veterans alone to manage these themselves. Therefore, identifying a clear picture of the impact of the pandemic on mental health would provide some answers around needed support and the lasting impact as the lockdowns continue.

The ability to regulate emotions can also have a significant impact on veterans when navigating everyday life (Adler et al., 2011). This ability would seem appropriate during restrictions as access to regular adaptive strategies are either reduced significantly or unavailable altogether. However, veterans can also choose not to employ coping strategies and attempt to avoid their difficulties. Experiential avoidance refers to when an individual is not willing to acknowledge their difficult internal experiences and makes conscious efforts to avoid or even escape them as a means of coping (Hayes et al., 1996). These experiences can include memories, negative emotions, physical symptoms, and unwanted thoughts. With regards to psychopathology, maintenance and development of mental health difficulties, avoidance is thought to play a pivotal role within this (Hayes et al., 2012). Kashdan et al. (2009) argued that whilst avoidance may be an adaptive strategy following a traumatic experience (such as direct combat), the learned response to specific emotions and thoughts can present as a challenge in day-to-day life situations. As a result, avoidance can interfere

with day-to-day functioning; potentially blocking the pursuit of value-based goals and achieving positive wellbeing (Hayes et al., 2006).

Examining positive coping mechanisms, Knee (1998) identified that utilising reflective attempts to solve problems and grow from the experience can provide long-term benefits. A study by Demers (2011) found that social support (not only from families and partners but also comrades and services) to be an important lifelong coping strategy. Creating a new meaningful narrative is seen to be important as it allows veterans to identify possibilities for the future; reducing the later probably of enduring mental health difficulties (Tick, 2012). Slone and Friedman (2008) found that an adaptive approach to coping is necessary for addressing specific difficulties with veterans. Orientating veterans to learning healthy, adaptive responses was key, as well as healthy attitudes. However, this should still be done whilst maintaining the protective factors associated with being a military individual; such as safety, discipline, and focus. This is particularly useful as one of the primary difficulties seen within veterans involves the management of a military identity within a civilian-dominant pandemic. Not only can coping strategies be inaccessible but also coping capacity can be impaired during the pandemic. A study conducted by Taha et al. (2014) during H1N1 flu (known as 'swine flu') outbreaks, found emotionally focused coping strategies, such as self-blame, a strong sense of guilt, rumination and resignation were positively associated with anxiety about the virus. Veterans who find themselves without access to strategies may potentially struggle to not only discover new ones but also identify when old strategies no longer work. This coupled with the potential for previous mental health difficulties to compound the situation presents us with a problematic scenario, whereby some veterans may be faced with mounting difficulties but few opportunities to intervene.

Social connectedness

Social connectedness is a construct derivative of belongingness, in that it places focus upon interpersonal bonds between the self and others as well as focusing on how we fit into society (Lee & Robbins, 1995). Individuals who lack the skills or opportunities to facilitate social connectedness have been shown to experience mental and physical difficulties, including diminished wellbeing, poorer physical health, and reduced psychological functioning (Raley, 2017). In addition to this, social connectedness is inversely related to several negative health outcomes, including depression, anxiety and stress (Hawkley &

Cacioppo, 2010). As a construct, emphasis is placed upon the subjective experience of the individual, whereby their perception of their social needs is either fulfilled or unfulfilled to the quantity or quality necessary for their social relationships (Lee & Robbins, 1995).

Military veterans have been shown to experience negative impacts from lack of social connectedness; with veterans identifying connectedness as a predictor for depressive symptoms (Teo et al., 2018). The promotion of social connectedness through peer and veteran-specific programmes have been shown to have positive effects on mental wellbeing as well as establish and strengthen potentially useful long term social networks (Greden et al., 2010). The emergence of the COVID-19 pandemic has impacted the general population's ability to connect with others through means of social networks, interpersonal relationships and physical contact (Adamczyk-Sowa et al., 2021; Amsalem et al., 2021). Restrictions including social distancing, 'stay-at-home' orders, and home 'shielding' have not only limited social contact for veterans but have potentially deprived them of essential connections, in particular family support for managing ongoing psychological distress, worry and uncertainty (Nitschke et al., 2021; Sarah et al., 2021). Brooks et al. (2020) and Di Giuseppe et al. (2020) have identified how social isolation can contribute to alterations in the psychological balance of adults. Prolonged confinement to homes, opportunities to ruminate, boredom and lack of contact with significant others can contribute towards the perception of threat (Brooks et al., 2020). From this, dysfunctional coping strategies and poor adapting can lead to prolonged distress (Rolland, 2020), which are compounded by the lockdown restrictions. This can be overcome through maintaining regular communication and opportunities to connect with significant social contacts. Research during the pandemic has already highlighted the benefits of social connectedness for improving wellbeing even during restrictions (Wu et al., 2021)

Post-traumatic stress disorder and Growth in Veterans

The prevalence of PTSD is seen as higher amongst UK veterans than in the general population (Parry et al., 2021). Nationwide 'stay at home' orders have disrupted the lives of veterans due to economic upheaval, increase in family stress and the disruption and (in some cases) breakdown of support systems (Held et al., 2020). This as a result may have contributed to the increase in underlying PTSD symptoms. The estimated PTSD prevalence in the general UK population is 3% (Bisson et al., 2015; McManus et al., 2009) compared to veterans where it is between 4% and 6% (Stevelink et al., 2018). PTSD from traumatic events

is understood to cause serious psychological harm to individuals, including anxiety, distress, and depression(Harding et al., 2014). There is a wealth of literature to suggest that placing a focus upon previous negative events or experiences of past trauma can lead to an exacerbation of difficulties, such as worrying, fear of being out of control and pessimism around the future and the situation ever resolving (Shigemoto et al., 2017). Having extended periods to ruminate on previous trauma is one possibility that comes with the pandemic and UK restrictions, in that individuals are less able to access activities and networks that help them avoid extended periods of rumination (Khan et al., 2020). Psychosocial responses to outbreaks of disease can manifest into psychological distress, including prolonged and high levels of mental difficulties. Mazza et al. (2020) found that the psychological impact during the current COVID-19 outbreak is similar to the effects of quarantining during historical worldwide epidemics (e.g. Ebola, SARS, Equine flu). The effects of quarantining can be seen by markedly increased levels of post-traumatic stress, increased prevalence of depressive symptoms, and social isolation (Philip & Cherian, 2020).

Whilst the risk of traumatisation and re-traumatisation is evident within the population, some studies have begun to highlight the role of post-traumatic growth (PTG) as a potential outcome of the pandemic. A meta-analysis by Wu et al. (2019) has previously suggested that individuals who have experienced a traumatic event could later report moderate-to-high PTG in the future. This was evident within a wide range of trauma types, including military-related. Within veteran samples, early research has suggested that the experience of traumatic events during the pandemic may also stimulate PTG through improved social relationships, spiritual changes and an increased appreciation of life (Pietrzak et al., 2021). Palmer et al. (2017) found that experiences of growth were linked to being proactive to engage in positive change, openly seeking help from others, socially connecting through shared experiences, and having a supportive network in place.

Polyvagal theory

Polyvagal theory describes an autonomic nervous system (ANS) that is influenced by the central nervous system (CNS) and responds to signals from bodily organs as well as the environment (Porges, 2018). Originating from an evolutionary and neuroscientific school of thought, polyvagal theory identifies the primary role of the vagus nerve; the tenth cranial nerve within the human body, which interfaces with the parasynaptic control of the lungs, heart and digestive system (Walker, 1990). The origin of the dorsal vagal pathway of the

parasympathetic branch and its immobilization response lies with our ancient vertebrate ancestors and is the oldest pathway. The sympathetic branch and its pattern of mobilization were next to develop. The most recent addition, the ventral vagal pathway of the parasympathetic branch brings patterns of social engagement that are unique to mammals. According to the theory, when individuals feel safe, they can regulate their bodily state efficiently to promote restoration and functionality; inhibiting the fight-flight mechanism of the sympathetic nervous system when presented with a potential threat. There are three identified polyvagal states: Dorsal vagal complex (DVC), Sympathetic nervous system (SNS) and Ventral vagal complex (VVC).

The DVC is viewed as the most primitive and evolutionary branch of the parasympathetic nervous system. It is responsible for immobilisation i.e., responding to potential threats or dangers through the 'freeze' response, including feigning death and behavioural shutdown. The SNS in comparison is responsible for mobilisation, whereby it allows us to react to potentially life-threatening situations through activation of the fight-or-flight system. This system is often synonymous with the fight-or-flight system described with anxiety disorders with which individuals report perceived threats and their bodies physically mobilise to escape the potential danger. This can be problematic, especially when there is no immediate threat, yet the body reacts via its evolutionary designed processes. Finally, the VVC, also known as the social engagement system, is the second branch of the parasympathetic system. Described as the 'ventral brake', this system can utilise social interactions to regulate physiology and prevent the threat response. When individuals are faced with potential threats, activation of this social system can be soothing and protecting, regulate anxiety and prevent the potential for the body to mobilise for a threat that is not imminent.

From the literature, there is emerging evidence around the links between polyvagal theory and traumatic experiences and PTSD (Kolacz et al., 2019). Survivors of trauma and those who have experienced traumatic events often report difficulties with autonomic functions and threat-related difficulties including anxiety and hypervigilance (Van der Kolk, 2014). Those with PTSD often report high-frequency heart rate variability, as well as poor regulation of the social engagement system and less ability to apply the 'ventral brake' (Sahar et al., 2001). Veterans are seen to have an elevated perceived threat following a recorded traumatic incident from active service (Grupe et al., 2019), suggesting that they may have ongoing difficulties activating their social systems during everyday life. However, under the

context of the current pandemic, this complicates this process further when they are unable to continue accessing opportunities to connect with others and engage socially. During a lockdown, there is potential for the role of the autonomic system in exacerbating threat reactions to isolation and restrictions (Porges, 2020). As individuals will have fewer opportunities to socially engage with others, they will subsequently be unable to down-regulate their system to promote calmness and connectedness. Whilst this will be a potential difficulty for the general population as well as the veteran population, for veterans with traumatic histories, this may be more detrimental as the lockdown continues.

Aims and objectives

The aims of this study were related to identifying the impact of the COVID-19 pandemic in the UK on veterans.

To investigate the relationship between coping, depression, anxiety, traumatic stress, coronavirus anxiety, and social connectedness following COVID restrictions using a cross-sectional survey

It is hoped that through examining the relationship between mental health outcomes (anxiety, depression, traumatic stress), coping, coronavirus anxiety and social connectedness, we can begin to develop an understanding of the prevalence of some of these difficulties, how they interact with each other and if the pandemic produces similar difficulties within veterans as previous literature, pre-pandemic. These constructs were captured using psychometric measures within the online survey.

To investigate these relationships, predictions were tested (see hypothesis in journal paper) and exploratory analyses were carried out. This was to not only confirm previous literature findings but also explore these constructs within the context of the pandemic.

To use the results from the survey to inform qualitative data collection and recruitment to interviews

The data collected from phase one of this study aimed to establish a baseline within the sample and bring about an informed piece of analysis that demonstrated qualitative rigour. In addition to this, the results were purposive in that they were sued to construct the interview schedule for the phase two interviews, as well as select the sample of participants for interview.

To gain an experiential understanding of the impact that COVID restrictions may have had from the veteran perspective

An experiential understanding of the impact of COVID was formed by interviewing participants and using this data to create meaningful themes and an overall narrative to depict the collective and individual experiences of the veterans. Using interviews provided benefits in that: (1) it allowed for triangulation of results from both phases of the study to generate a comprehensive understanding of the impact of COVID, (2) an interview schedule could be used that was informed by the phased one results and therefore representative of the population, and (3) it provided meaningful insight into the experiences of veterans during a time that is uncertain and ongoing. It is believed that this study is the first of its kind and therefore can offer novel and interesting ideas worth exploring in future research.,

Extended Method

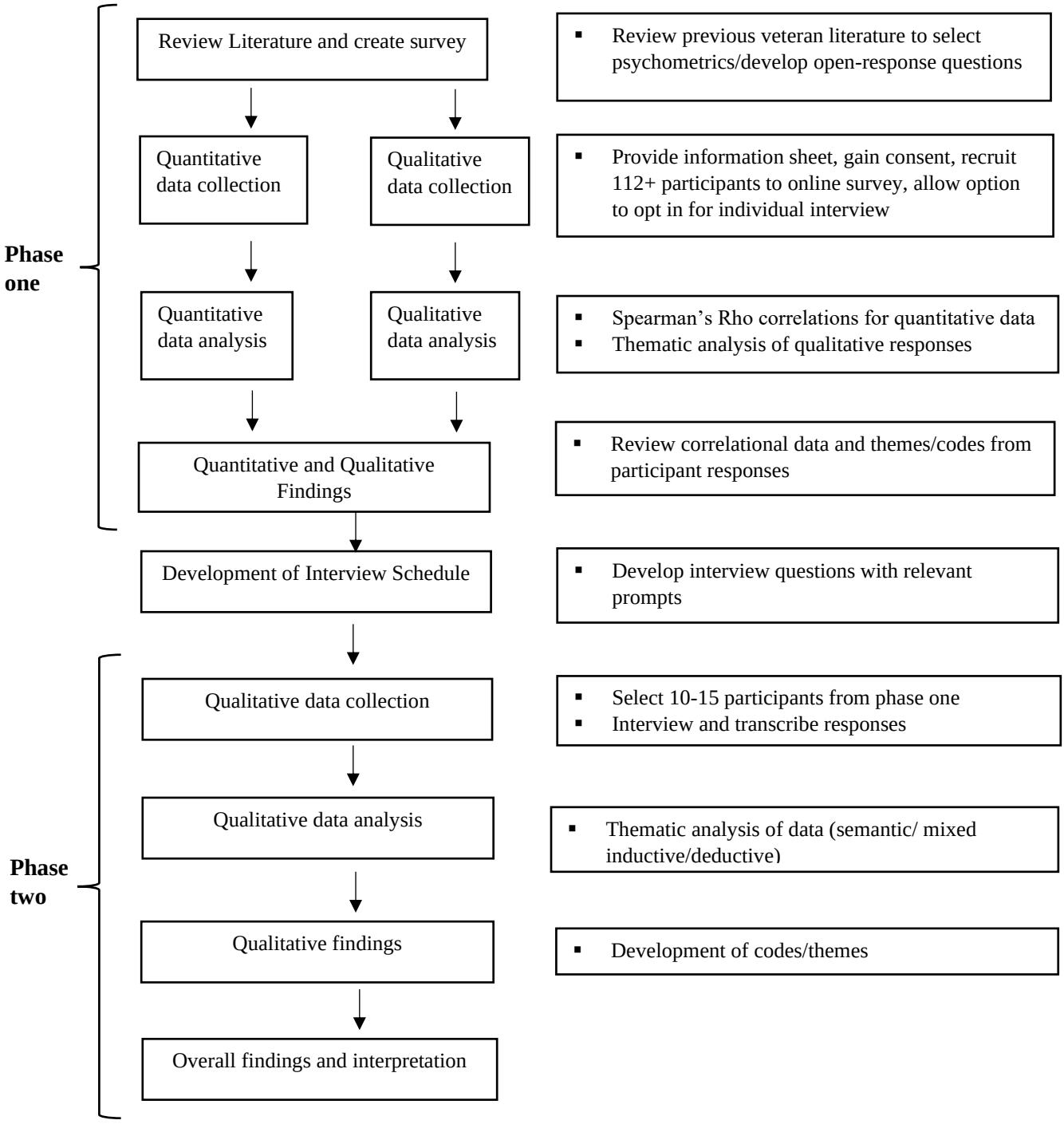
This section outlines the mixed methodology used within this study. A sequential explanatory design was used and consisted of two phases: a quantitative online survey with British Armed Forces personnel, and a set of individual semi-structured interviews with a sub-sample. The rationale for the chosen design is discussed, as well as the epistemological stance and ethical considerations for both phases of the study.

Study design

Due to the continuing development of the COVID-19 pandemic and restrictions within the UK, little research has been carried out with military veterans and the impact upon coping, depression, anxiety, traumatic stress, coronavirus anxiety, and social connectedness. An initial quantitative survey was used to not only explore these factors within the sample but also to purposefully select participants for the qualitative phase of the study. This method is known as the 'participant selection model' and can be useful for identifying and grouping individuals for interviews based upon quantitative data collected from a wider sample of the population studied (May & Etkina, 2002). The results from the analysis of the quantitative data could then be used to develop specific areas of the interview which could be explored with participants and developing an understanding of the current pandemic experience within the population. The procedure of the sequential explanatory design can be seen in Figure 4 below (Creswell et al., 2011).

Figure 4

Process of sequential explanatory (participant selection model) methodology



Epistemology

Epistemological Position

Critical realism was the epistemological stance adopted for this research. This is an approach that offers a radical alternative to the already well-established paradigms of positivism and interpretivism (Houston, 2001; McEvoy & Richards, 2003). The approach assumes transcendental realist ontology as well as an eclectic realist/interpretivist epistemology (Easton, 2010). As social sciences should be critical of their objects, to fully understand the social phenomena being examined, we must evaluate them critically (Sayer, 1992). Within this, it would be useful to approach the research question using an epistemology that views reality as systematically open, transformational, and stratified. Therefore, critical realists would argue that the chosen methodology should be dictated by the nature of the research problem (Olsen, 2002).

The use of a mixed-methods approach allows for not only the exploration of causal mechanisms within populations but also to follow a course of discovery around potential emerging social phenomena. Combining quantitative and qualitative approaches allow for the designing of specific research questions that are grounded within the specific context of their study (Johnson & Onwuegbuzie, 2004). Using a mixed-methodology approach can also aid with understanding specific topics in greater depth as well as increase confidence in specific findings; offsetting any shortcoming that arises from single approach methodologies (Albert et al., 2009; Hoover & Krishnamurti, 2010).

Despite these benefits, mixed methods research can be criticised for accepting positivist and social constructivist positions equally; selecting methodologies based upon pragmatism (McEvoy & Richards, 2006). Therefore, explicitly referencing one's ontology and justifying this position can strengthen the critical realist position and allow mixed methods to be applied thoughtfully within research (Zachariadis et al., 2013). Utilising a critical realist perspective in this research allows theorizing of explanations for tendencies in phenomena that have been observed or experienced (Haigh et al., 2019); leading to a richer understanding of the phenomena. However, it's imperative to consider that observations remain context-bound and cannot be generalised to a wider picture (Shannon-Baker, 2016),

A sequential explanatory design consists of two phases: a quantitative followed by qualitative (Creswell et al., 2003), whereby the researcher first collects and analyses the quantitative data, followed by the collection and analysis of qualitative data. Both data sets are then synthesised to create an overall understanding of the phenomena being studied. Utilising a sequential explanatory method within this research provides opportunities for quantitative results to be explored in more detail (Ivankova et al., 2006). This design can be especially useful when unexpected results arise from a quantitative study (Morse 1991). The use of additional research methods (such as interviews) can provide context and help uncover meaning and the mechanisms behind processes (Zachariadis et al., 2010); with qualitative data adding detail and richness to the quantitative findings. The mixing of methodologies within this sequential explanatory research design allowed the researcher to connect quantitative and qualitative phases, selecting participants for the second phase from data collected and the research aims; grounding the overall interpretations. Mixing of quantitative and qualitative methods can also result in higher quality of inferences (Tashakkori & Teddlie, 2003) as well as ground results within all phases of the methodology.

Reflexivity

The researcher aimed to explore social phenomena occurring within the study from the perspective of the participants. This is not always possible, as a researcher's background, beliefs and position can affect the chosen methodology used, the angle of investigation, and the summarising and consolidation of findings and conclusions (Malterud, 2001). Through individual experiences, I hold assumptions that veterans experience significant difficulties following discharge from the British Forces and with additional stressors related to the COVID-19 pandemic and UK restrictions, it is assumed that this will have an impact on the population. Additionally, the researcher holds their views and experiences around the UK restrictions, the impact this has had on mental health, access to social networks and coping abilities. Therefore, to guard against potential bias and promote a self-reflective stance, a reflective journal was kept throughout the research process to identify any influences relating to the final results.

Ethical Considerations

The study was reviewed and granted ethical approval by the Nottingham Research Ethics Committee (See Appendix II). During phase one, the study was approved with the

condition that the interview schedule was re-submitted for consideration upon the completion of data collection. This was submitted and later approved before the commencement of interviews (See *Interviews schedule development* section for further details).

Confidentiality

In phase one, responses within the surveys were anonymous unless participants chose to opt into phase two of the study. As personal demographic data, as well as survey responses, were recorded, the Online Surveys programme was only accessible by the researcher and was password protected. Once data from the survey was ready to be extracted, it was transferred to a secure laptop only accessible by the lead researcher.

During phase two, audio recordings were transferred to a secure laptop before being erased from the dictaphone/online platform (i.e. MS Teams, zoom etc.). Pseudonyms were provided for participants during the transcription process. Transcripts were stored electronically within a password-protected folder. Contact details for participants who opted for the interview were stored on a password protected excel spreadsheet.

Informed Consent

For Phase one, all participants were informed of the nature of the study and were provided with a detailed information sheet explaining this before the start of the survey (Appendix III). Details were provided for the chief investigator should participants wish to report any concerns. Additionally, at the end of the survey, participants were signposted to other services (e.g., veteran charities, support services, GP etc.). As the survey was online, participants who chose to complete the survey could not be regulated. To gain informed consent, participants were asked to agree to the conditions of participation and express no concerns around the information provided within the information sheet (Appendix IV).

During phase two, participants were contacted via email on up to two occasions to confirm they would like to be a part of phase two of the study. An information sheet and a copy of the consent form were sent via email. (Appendix V and VI). If they were happy to continue, they were asked to return the consent form completed. In addition to this, verbal consent was gained and recorded before the start of the interview. Participants were offered to complete the interview via their chosen method of communication (e.g. telephone, remote video call). Consideration was given for the potential to discuss topics that may be distressing to the participants. If support was required, participants were signposted accordingly.

Withdrawal

From the first point of contact, participants were informed of their right to withdraw from the study and that their participation was purely voluntary. Participants could stop completing the survey at any time and their data would be withdrawn. Once participants had completed the survey, it was not possible to withdraw their data unless they had opted into phase two and had provided contact details. This was because responses were anonymous, and participants were not allocated any identifiable information. With interviews, participants could withdraw at any time before or during. Additionally, they were able to withdraw from the study up to 48 hours following their interview by contacting the researcher.

Protection of Participants

When participants had finished completing the survey, they were provided with details for relevant support networks and charities, should their participation or the topics have caused any distress. During interviews, there was a possibility that participants may find discussing certain topics distressing. However, the researcher offered support to manage this distress. If further support was required, participants were signposted accordingly.

Debrief

All participants were debriefed at the end of the online survey, with details outlining the aims for the research and what it involved (See Appendix VII). Whilst participants were not able to withdraw their information once submitting, they were able to contact the researcher if they had any questions or concerns. There was also an opportunity for participants to provide contact details and opt-in for interviews. For interviews, participants were first given a verbal debrief outlining the aims. They were also redirected to the contact details of the researcher if they had any questions. Participants were offered to be sent a summary of the study once it was completed.

Phase One: Quantitative Methodology – Online Survey

Participants

Inclusion Criteria. Participants were required to have served within one of the branches of the UK armed forces: British Army, Royal Navy or Royal Air Force. Also, participants needed to have been discharged from their respective military branches and have no further involvement (this included reservists).

Exclusion Criteria. Any participants who did not meet the inclusion criteria were excluded from the study.

Sample Size. The effect size used within the a priori power calculation was selected as it represents a 'medium' effect size for correlation coefficients (Cohen, 1992). Also, within the literature around coping and COVID-19, effect sizes between .3 and .4 have been found. Therefore it felt appropriate for this study to select a sample that accounts for medium effect size (Guo et al., 2020), to reduce the risk of type II errors.

Recruitment and Participants. Access to the online survey was facilitated by a hyperlink that was shared across various social media platforms, including the researcher's Facebook account, Twitter, and LinkedIn. Local and national veterans' charities were contacted by email and were sent details of the study for sharing. These included: Combat Stress and Forces in the Community. An advertisement was used on social media (See Appendix VIII), which included the inclusion and exclusion criteria for the study, the study aims and contact details of the researcher. Friends and family were encouraged to share the post to create a snowball effect. Snowball sampling can be an effective way of quickly recruiting individuals when their participation is anonymous and voluntary.

A total of 634 people accessed the survey via the link. From this, 218 participants (34.4%) completed the survey to various stages but not in its entirety. Five respondents (2.3%) did not meet the inclusion criteria. A total of 130 individuals completed the survey and their data were included.

Survey and Measures

The survey was developed from discussions with supervisors and previous literature. A Military veteran was recruited to the study within a consultation role and provided feedback and direction for structuring and disseminating the survey. This involved reviewing the language and terminology used for the demographic questions, accessing social media groups for disseminating the survey, and ensuring that the survey was concise and accessible to complete.

The survey was then imported into *Online Survey (Formerly Bristol Online Survey)*; an online platform used for disseminating surveys and collecting response data. The survey comprised of an information sheet detailing the aims of the study and what it involved an online consent form and a debrief sheet.

The following military and socio-demographic information were collected: age, sex, marital status, military branch, years of service, discharge circumstances, employment status, years since discharge, and COVID status. Following the completion of these questions, participants were asked to complete measures relating to the research questions (See Appendix IX).

Brief COPE Scale. The Brief COPE Scale *(Carver, 1997)* is a 28-item self-report questionnaire developed to assess responses relevant to effective and ineffective coping. Developed as a shorter measure from the original COPE Inventory (Carver et al., 1989), and the coping model by Lazarus and Folkman (1984), the scale measures 14 conceptually differentiable coping reactions. Coping is seen to denote efforts to either ease the individual emotional anxiety provoked by the stressor or modify the source of environmental anxiety (Duangdao & Roesch, 2008). The measure uses a 4-point Likert scale with items including '*I've been saying to myself this isn't real*' and '*I've been using alcohol or other drugs to make myself feel better*', with response options ranging from *'I haven't been doing this at all'* to *'I have been doing this a lot'.* The scale demonstrates adequate evidence of convergent and discriminant validity as well as meaningful associations with a wide range of constructs including posttraumatic stress (Schnider et al., 2007) and has been used within veteran populations (Khazem et al., 2015).

Coping scales have gathered criticism within the literature as they usually ask individuals to respond to hypothetical situations and then rate these accordingly, compared to 'in the moment' coping responses. This raises questions around the validity and reliability of coping scales (Porter & Stone, 1996; Steptoe et al., 1989) However Greenaway et al. (2015) argued that whilst coping measures, in general, can hold inconsistencies, these can be overcome by the researcher applying rigorous scrutiny to measures; selecting ones which reflect the population in question and the current narrative within the literature.

Carver (1997) argued that the Brief COPE is multifaceted in that it can be adapted to suit the individual researcher's needs; allowing for specific samples of interest to be explored. This has led to further research into the categorisation of factors and how coping strategies can be grouped to best represent the population being studied. Within the literature, there is competing evidence to suggest that a two-factor or a three-factor model may lead to a more useful categorisation of coping strategies. A two-factor model has been suggested as helpful when exploring PTSD within veterans, as these categories (Avoidant/'emotion-focussed' and

Active/'action-focussed' Coping) are predictive of symptom severity (Boden et al., 2012; Martindale et al., 2016).

In contrast studies with the general population (Su et al., 2015) as well as veterans (Rice et al., 2014) have provided evidence for a three-factor model; categorising strategies into Emotion-focussed Coping, Problem-Focussed Strategies and Dysfunctional Strategies. This model was further expanded on by Cramer et al. (2020) through the development of a four-factor model (Problem-focussed, Avoidant, Socially Supported, and Emotion-Focussed). However, whilst this model demonstrated the best model fit in comparison to other models, fit indices were poor when based upon established statistical literature guidelines. The authors, therefore, concluded Carver's (1997) original supposition that the Brief COPE is best applied to each unique sample with clearly defined categorisation and rationale.

Within this study, a three-factor model (Emotion-focussed Coping, Problem-Focussed Strategies and Dysfunctional Strategies) was used to categorize responses to the Brief COPE. This seemed prudent as recent veteran literature has utilised this method successfully through having three categories for grouping coping styles.

The Social Connectedness Scale-Revised (SCS-R). The SCS-R is a 20-item measure used to explore the extent to which individuals feel connected to those within their social world (Lee et al., 2001). The measure uses a 6-point Likert scale with items including '*I feel close to people'* and '*Even around people I know, I don't feel that I really belong'*, with response options ranging from *'Strongly Disagree'* to *'Strongly Agree'.* Higher scores indicate a high level of social connectedness with potential scores ranging from 0-120. The scale demonstrates good internal reliability (Cronbach's $\alpha = .92$) as well as discriminant and convergent validity, correlating with self-esteem, and negatively with loneliness and social distress. The scale was derived from the 'Social Connectedness Scale' (SCS) by Lee and Robbins (1995); a measure which built upon how individuals with low connectedness fail to develop appropriate interpersonal behaviours or later develop dysfunctional interpersonal behaviours (Kohut, 1984). These ideas explored how adults identify shared interests (e.g. Exercise, sports) and healthy interpersonal skills (e.g. assertiveness, intimacy) to gain and maintain social relationships with others. These behaviours are subsequently validated and create a sense of connection or 'closeness'. Those with low connectedness display difficulties exhibiting these interpersonal behaviours and instead rely upon behaviours characterised as dysfunctional; synonymous with insecure attachment styles (Hazen & Shaver, 1987).

Through adopting these styles and behaviours, individuals can avoid further rejection or criticism, leading to greater psychological distress (Lee & Robbins, 1995) The 'Social Connected Scale' aimed to measure this definition of connectedness highlighted by Kohut; creating a distinction between other similarly described concepts, including loneliness and social identity.

However, the SCS was found to have psychometric limitations with regards to including all negatively worded items and a negative skewness in the response distribution (Lee et al., 2001). This then led to questions around the scales ability to capture the full experience of connectedness due to the absence of positively worded items. The newly revised SCS provides evidence of convergent and discriminant validity. For convergent validity, the SCS-R was positively correlated with measures of independent self-construal and collective self-esteem as well as negatively correlated with loneliness, social distress, and avoidance. With regards to discriminant validity, SCS-R was not significantly correlated with measures of interdependent self-construal and collective identity.

There is little literature around the use of SCS-R within veteran populations and this may be because social connectedness is a construct that continues to be interchanged with others (such as loneliness and social support). From the available literature, the SCS-R has been used to explore the implications of connectedness within veteran populations; finding that not only can it influence health implications and PTSD symptomology (Raley, 2017), but it has also shown relation to veterans who experience potentially morally injurious events (PMIE); synonymous to criteria for meeting a PTSD diagnosis (Schumacher, 2017). As a construct, social connectedness is seen as imperative for reducing the vulnerability of the veteran population; drawing links with suicidality (Kelley et al., 2019) and also highlighting the mediating role it plays between direct combat experiences and PTSD symptoms (Kintzle et al., 2018). Research is beginning to emerge around the impact of COVID and the lockdown restrictions in the UK and how social connectedness and lack of access to social support can have a negative consequence on mental health outcomes (Austin et al., 2020). Therefore, the inclusion of the SCS-R allows for comparison to be drawn using a framework that not only draws upon the relationship between low connectedness and outcomes, but also high connectedness and ways in which individuals have maintained or increased this.

Coronavirus Anxiety Scale (CAS). The CAS is a 5-item brief mental health screener to identify the probable causes of dysfunctional anxiety associated with the COVID-19 crisis

(Lee, 2020). The measure has good reliability (α = 0.92) and is described as a unidimensional construct with a structure that was shown to be relevant across gender, race, and age. Construct validity was demonstrated with correlations between CAS scores and coronavirus diagnosis, history of anxiety, coronavirus fear, functional impairment, alcohol/drug coping, suicidal ideation, as well as social attitudes (Lee, Mathis, et al., 2020). Cut-off scores of ≥9 (76% sensitivity and 90% specificity) have shown the strongest diagnostic effectiveness among scores. Each item of the CAS aims to address a distinct physiologically based fear or anxiety reaction to coronavirus related thoughts or information. High CAS scores are expected to be associated with negative psychological effects and maladaptive coping with the COVID-19 crisis (Choi et al., 2020)

Reactions towards mass infectious diseases can often trigger fear and anxiety; disrupting psychological wellbeing and everyday behaviours (Balaratnasingam & Janca, 2006). Previous literature has demonstrated the links between health-related anxiety and elevated symptoms of post-traumatic stress and suicidality (Wu et al., 2009; Yip et al., 2010). Similarly, individuals who experience anxiety towards the pandemic are likely to develop symptoms of depression, as well as hold pessimistic views of the future; subsequently affecting behaviour and coping (Galić, Mustapić, Šimunić, Sić, & Cipolletta, 2020). Therefore, the Coronavirus Anxiety Scale (Lee, 2020) was created to help identify those particularly affected by the fear and uncertainty of this growing pandemic crisis.

Whilst the measure is fairly new, initial psychometric properties look promising. The measure is short and easy to administer with a clear measurement of the construct of COVID-19 anxiety. Given the ongoing climate of the pandemic, and the little research which has used the measure, including this within this study was deemed useful as it allows the veteran population to be explored as a new population, as well as distinguish between GAD symptomology and anxiety specifically related to the impact of the pandemic and subsequent restrictions.

Clinical Measures

Clinical measures were included in the survey to primarily distinguish between the absence and presence of clinical problems within the sample through cut-off scores and categorisation of symptom severity.

Patient Health Questionnaire (PHQ-9). The PHQ-9 is a 9-item screening questionnaire used to measure the extent to which an individual is experiencing symptoms of

depression (Spitzer et al., 1999). The PHQ-9 was initially developed by Kroenke et al. (2001) as a subset of 9 questions from the full PHQ. Scores ≥10 are 88% sensitive and 88% specific for detecting Major Depressive Disorder (MDD). Criterion validity was also assessed in a sample of 580 patients. Cut off scores are categorised into the following levels of severity: 0-4 (None), 5-9 (Mild), 10-14 (Moderate), 15-19 (Moderately severe) and 20-27 (Severe). The PHQ-9 has high internal consistency (Cronbach's $\alpha = .89$) as well as construct validity.

A systemic review in 2010 concluded that the PHQ-9 is a well-validated measure that is accessible and can make a probable diagnosis of depressive disorder (Kroenke et al., 2010) across a multitude of populations. The measure has been used not only within mental health settings (Trangle et al., 2016) but also with physical health (Lee et al., 2014), suggesting that it can capture depressive symptoms across a multitude of presenting difficulties. Whilst the original measure was based upon DSM-IV criteria for depression, it has been identified that it can also be useful for the DSM-V within healthcare settings and the wider community (Sun et al., 2020)

The PHQ-9 has been used within general populations as well as veteran populations and continues to be an accessible measure within research literature for quickly identifying the presence of depressive symptoms. The measure has been previously used when identifying specific links to suicidal ideas and social isolation within the veteran population (Louzon et al., 2016). Often individuals with depressive symptoms can also present with other comorbid difficulties (including anxiety and PTSD) and these are particularly prevalent within military populations. The measure has been shown to work well in conjunction with these other measures when exploring the experiences of veterans (Murphy, Palmer, Lock, & Busuttil, 2017; Nazarov, Hunt, Davis, St Cyr, & Richardson, 2020).

As the PHQ-9 hold good psychometric properties, is easily administered and can provide useful cut-offs for separating responses based upon the intensity of symptoms, it was deemed a useful measure within the study.

General Anxiety Disorder Assessment (GAD-7). The GAD-7 is a 7-item screening questionnaire used to measure the extent to which an individual is experiencing symptoms of anxiety (Spitzer et al., 2006). Cut off scores are categorised into the following levels of severity: 5-9 (Mild anxiety), 10-14 (Moderate anxiety), 15 and above (Severe anxiety). Whilst the GAD-7 is not a diagnostic tool, it can be used to reflect symptom criteria for Generalised Anxiety Disorder in the Diagnostic and Statistical Manual of Mental Disorders,

Fourth Edition (DSM-IV). The measure has demonstrated good internal consistency (α = .92) and good test-retest reliability (r = 0.83; Spitzer et al., 2006). The measure also has good convergent validity, with a correlation of .72 with the Beck Anxiety Inventory (Beck et al., 1988). The measure is useful in identifying symptoms of anxiety both within the general population as well as clinical groups (Lowe et al., 2008).

The GAD-7 is the recommended tool within NICE guidelines for identifying varying levels of severity within the general population (NICE, 2020). Measures of anxiety are regularly used within veteran literature, with individuals experiencing significantly worse emotional health, general health and pain as a result of symptoms (Milanak et al., 2013). Whilst the Depression, Anxiety and Stress Scale (DASS) is also popularly used within veteran populations (MacDonell et al., 2016), the GAD-7 measure is regularly used within veteran populations due to its accessibility and ease of completion (Clarkson et al., 2016). Within this research, it was important to not overload participants with unnecessary questions, given the length of the survey. As the GAD-7 has not only good psychometric properties but is short, easy to complete and is regularly used within NHS health services, it was a good choice for this study.

PTSD Checklist for DSM-V (PCL-5). The PCL-5 (Weathers et al. 2013) is a 20-item self-report measure used to assess the 20 DSM-V symptoms of PTSD and responses to stressful experiences. The measure can produce a total score (0-80), offering a provisional PTSD diagnosis. Also, symptom cluster severity scores can be obtained by summing the scores for the items within a given cluster. These clusters include Intrusions, Avoidance, Negative alterations in cognition and mood, and Alterations in reactivity and arousal. The PCL-5 has been shown to have high internal consistency both within samples of veterans (.95; Pietrzak et al., 2015) and civilians (.95; Armour et al., 2015). Whilst construct validity has been limited, total PCL-5 scores are associated with generalised anxiety (r=.79) and depression (r=.73) within US army soldiers (Hoge et al., 2014). PCL-5 scores have the highest efficiency for predicting a Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) diagnosis of PTSD, with a sensitivity of 0.88, specificity of 0.69, a positive predictive value of 0.81, and negative predictive value of 0.78 (Bovin et al., 2016)

There is debate within the veteran literature around the use of cut-ff scores for identifying PTSD when using the PCL-5. Optimal cut-offs were initially believed to be between 30-34 as identified by Bliese et al. (2008). However, in a study by Murphy, Ross, et

al. (2017), it was found that a score of 38 was sufficient. It has been suggested that whether individuals are still active or if they have been fully discharged from service may affect their willingness to disclose on the PCL-5 and subsequently reach the threshold for PTSD. Therefore, selecting a cut-off score that reflects the status of the veteran population being studied is essential for categorising the scores from the sample. In addition, Murphy, Ross, et al. (2017), highlighted the potential for another classification: partial PTSD. With a score between 33-37, this can be used for detecting individuals who are approaching diagnosis and further separating scores within the sample. Research must identify which cut-offs it is using to minimise the likelihood of poor specificity or sensitivity.

Whilst other measures of PTSD symptomology are used within the literature such as the CAPS (Weathers et al. 2013), these are lengthy and take a substantial amount of time to administer due to their semi-structured format. Within the context of this study, we needed to be able to capture the extent to which the participants have experienced trauma-related symptoms whilst still engaging them in the survey. Therefore, including a measure such as the PCL-5 was beneficial as it is well validated, regularly used within the veteran population and flexible with regards to selecting cut-off scores to suit individual research aims.

When administering the PCL-5, this is often accompanied by the Life Events Checklist (LEC; Weathers et al. 2013); which allows respondents to identify potentially traumatic events from a pool of 16 options. Whilst this is useful for contextualising responses on the PCL-5, it was deemed lengthy for this research. However, it was important to capture this information in other ways. Therefore, participants were able to report if their responses were related to 1) a military experience, 2) a non-military experience, or 3) both. Additionally, those selected for interviews within phase two of the research could discuss this experience in further detail and this would be captured within the qualitative analysis as well as the overall findings of the study.

Follow-up responses. To capture any impact COVID may have had on participant responses, each measure was accompanied by a quantitative question: '*Do you feel your responses to the above questions are different now than they would have been before COVID-19 restrictions were imposed?*' (*yes, no, unsure*) and a qualitative question to allow the participant to elaborate and anchor their experiences ('*If so, then how?').* As the study is mixed methods and results from the survey would inform the development of the interview

schedule for phase two, it was useful to capture responses that could be analysed using qualitative methods and used to develop questions for interviews.

COVID-specific Questions. Two open-response questions were included in the survey: *'What impact has the COVID-19 lockdown had on your life?'* and *How have you coped in relation to this?* These questions were included to provide qualitative data to contextualise responses from the survey. Responses from the *Impact* question were used to contribute towards the selection of participants for phase two of the study (See *Kappa – Development of the* '*Impact' Likert scale* section.)

Opting for an interview. Participants were contacted via email in the first instance and were sent a copy of the information sheet detailing phase two of the study. Emails were sent seven days apart and a maximum of two emails was sent to participants. If a contact number was available this was called twice before participants were removed from the interview list.

Analysis

Statistical Analysis. The purpose of correlational research is to investigate the extent to which differences in one variable are related to differences in another variable (Leedy & Ormrod, 2010). Whilst experimental designs can provide potential evidence for causal relationships between variables (Talbot, 1995), the nature of exploratory research is to hold a more open enquiry to finding results. Whilst this does not mean that findings from correlations cannot be useful or contribute towards evidence-based practices (Sousa et al., 2007), caution should be taken when making inferences from results. Additionally, robust testing of the data before the selection of a statical test should be carried out (Swinscow & Campbell, 1997)

Assumption Testing

Data preparation and missing data. Data was initially transferred from the *Online Survey* platform into an excel spreadsheet. From here this was exported into SPSS 26 and data was checked for missing values. Within the Brief-COPE responses, 4 responses were missing across all participants. Responses for all other measures were accounted for. Quality research can be maintained if researchers allow for transparency when handling missing data (Dong & Peng, 2013). Within quantitative research, missing data may be accounted for and still contribute towards meaningful findings within psychological research, with 15-20%

missing data common within published studies (Enders & Bandalos, 2001). It was decided that multiple imputations would be used to handle the missing data, rather than mean imputation. This is due to mean imputation causing the standard error to be too low (Berglund & Heeringa, 2014) compared to multiple imputations which allow for unbiased parameter estimates with coefficients, accurate standard errors, and adequate power to find meaningful values significant (Allison, 2010).

Correlations and Assumptions. Inferential statical tests generally fall within two categorisations of tests: parametric and non-parametric data. Parametric testing relies upon assumptions around data distribution being met (known as 'normality of distribution'). In cases where data is not normally distributed, non-parametric tests are used. This usually involves the ranking of data. Whilst parametric tests are seen as the optimal within statistics, non-parametric tests can be up to 95% as powerful as their counterparts as the sample increases (Kitchen, 2009).

Correlations are a statistical test used to measure the association between variables. When data does not meet normality assumptions, several tests are available to measure the strength and direction of association between two ranked variables. Assumptions for Pearson's correlations are first tested before running correlations. If these assumptions are violated, then its non-parametric counterpart should be used.

Normality of Data. Many statistical tests including correlations are based upon assumptions that data are normally distributed (Field, 2013). Assumptions must be tested to be able to draw accurate and reliable conclusions around data and reality (Öztuna et al., 2006). Within this study, normality was tested in three ways: 1) Histograms, 2) Shapiro-Wilk Test, and 3) Skew and kurtosis.

Shapiro-Wilk Test. Shapiro-Wilk test was used to assess the normality of the outcome measures. The Shapiro-Wilk test is seen to provide better power than the Kolmogorov-Smirnov (Steinskog et al., 2007; Thode, 2002) when used with samples below 300 (Ghasemi & Zahediasl, 2012).

Skew and Kurtosis. To calculate normality for each of the variables using skew and kurtosis values, scores were converted into z-scores. This was achieved by dividing the skew and kurtosis values by their standard error values (Kim, 2013). Z-scores between -1.96 and 1.96 are seen to be normally distributed and significant at $p<.05$ (Field, 2013).

Spearman's Rank Correlations

Spearman's rank-order correlations can be used to test for the strength and direction of monotonic relationships, that being, where the value of one score increases so does the other, and when the values of one decrease, so do the other. Spearman's test first ranks data and then applies Pearson's equation to those ranks, producing a correlation coefficient (denoted by r_s). Spearman's rank-order correlations require two main assumptions to be met before analysing the data. These are as follows:

1) The variables should be measured on an ordinal, interval, or ratio scale.
2) Data should be monotonically related

Effect sizes, significance reporting and confidence intervals

The effect size within research is described as the 'magnitude of difference between groups'(Sullivan & Feinn, 2012). Significance values (known as *p*-values) are used to determine the probability that we can confidently reject the null hypothesis (Wasserstein & Lazar, 2016). Whilst significance values can reveal if an effect size exists, they cannot provide the size of the effect. *P*-values are dependent on two factors: the sample size used, and the observed difference between the groups tested. The sample size, in particular, can determine any conclusions drawn around the effect of a variable/intervention and can subsequently lead to incorrect conclusions being made based upon significance or insignificance. Dunkler et al. (2020) argued that the reporting of effect sizes is much more informative than statistical significance and should be reported as so. Additionally, the authors highlighted that effect sizes should be reported with accompanying 95% confidence intervals. This would reflect a more precise estimate from the data, and alongside effect sizes, can provide answers to important questions of clinical relevance.

Multiple Comparisons

When making multiple comparisons within a statistical analysis, this can increase the likelihood of achieving significant results by chance (known as Type 1 errors or 'false-positive) and can affect the overall reporting of results (Emmert-Streib & Dehmer, 2019). Whilst it is believed that type-1 errors can never be fully extinguished and for the null hypothesis to be strictly true (Gelman et al., 2012), adjustments should be considered when weighing up findings from correlations that have more than two variables.

Within exploratory studies, there is less need for strict adjustment to multiple comparisons, as long as the author is clear and acknowledges reasons for doing so. Althouse (2016) outlines that multiple comparisons do not need to be accounted for as long as the following is included within the write up of any results: 1) the writer describes what was done in the study, 2) they report the effect sizes, confidence intervals and *p*-value, and 3) they allow the reader to form their judgements around conclusions. It was not deemed necessary to adjust for multiple comparisons within this study due to the small number of comparisons present within each correlational analysis. Within this study effect sizes, confidence intervals and significance levels were reported to allow the reader to form their conclusions.

Kappa and agreement levels

The use of agreement levels can be misleading in research; particularly when using more than one rater (Barrett et al., 1990). Also, agreement levels cannot correct for the variance in rated scores that occurred due to chance (Hallgren, 2012). To ensure that ratings are valid, a more robust measure must be used.

Cohen's kappa (Cohen, 1960) is used to determine levels of agreement when agreement expected by chance is taken into account. When the responses being rated are ordered, 'weighted kappa' should be used as disagreements are weighted differently (Cohen, 1968). This can be linear (i.e. the difference between each category is equal) or quadratic (i.e. the difference between the first and second category is less important than the difference between the second and third category etc.) in nature and are dependent on the data set being used. A linear weighted kappa was calculated for ratings between DB and each of their supervisors (RSF; TS).

Reflective Thematic Analysis

Reflective Thematic analysis (TA) is a qualitative method of analysing data that involves identifying, analysing and reporting patterns within data (Braun & Clarke, 2019). This method is a re-named and re-clarified definition of the original TA method outlined by Braun and Clarke (2006) that addresses previous misconceptions around the assumptions, procedures and use of researcher reflexivity within the process. Reflective TA is seen as an approach that allows the researcher to be creative, subjective, and reflexive, with researcher subjectivity understood as a resource, rather than a threat to knowledge production (Gough & Madill, 2012). The analysis is seen to involve six stages of analysis (See Table 12).

It is argued that researchers should not succumb to proceduralism when utilising TA as the approach should prioritise reflexivity, creativity, and theoretical engagement over the procedure. Themes do not passively emerge from the data but instead are active and generative in that new ideas and interpretations are generated from the researcher (Ho et al., 2017). Quality reflective TA is seen when the researcher not only engages with the data thoughtfully and creatively but is reflective throughout the process. This method aligns itself with this research due to its exploratory nature. The structure of reflective TA allowed the researcher to carefully explore the responses of participants and develop themes through

Table 12

Stages of Thematic analysis (Braun & Clarke, 2006)

Stage	Description of the process
1. Familiarizing yourself with your data	Transcribing the data, reading and re-reading, noting down initial ideas
2. Generating initial codes	Coding interesting features of the data in a systematic way across the data set, the collating data relevant to each code
3. Searching for themes	Collating codes into potential themes, gathering data relevant to each potential theme
4. Reviewing themes	Testing and checking if the themes work in relation to the coded extract as well as the entire data set, creating a thematic 'map' of analysis
5. Defining and naming theses	Ongoing analysis to refine specifics of themes, generating clear definitions and names for each theme
6. Producing report	Selection of compelling extract examples, the final analysis of extracts and relaying this back to the research question and literature.

interpretation of their experiences, rather than directly extract key ideas to summarise. From a critical realist standpoint, reflexive TA can be applied easily due to its ability to both reflect reality, as well as deconstruct reality as it is presented (Braun & Clarke, 2006). However, with any theoretical framework comes assumptions around the nature of data and what this represents can be forgotten. Therefore an epistemological stance and clear argument must be made to ensure transparency through the process of analysis (Healy & Perry, 2000). Critical realism is seen as both essential and compatible with qualitative research as social enquiry can be considered through understanding individual experiences and what occurs within society (Danermark et al., 2019; Manicas, 2009). During the analysis process, the researcher was mindful of the benefits of a critical realist approach in that participants could provide meaning to their experiences, but also be fallible within their accounts. Interpretations from the data were therefore grounded within-participant extracts and cross-checked with research supervisors to reach a joint consensus.

Extraction of data

Data was initially extracted from the *Online survey* into an excel spreadsheet. This was then imported into NVivo 12 software for analysis.

Stages of analysis:

The online survey was used to elicit responses from participants around their beliefs, attitudes and emotions (Mrug & Windle, 2010). The use of close-ended questions can be limited for achieving this as it required participants to select from a list of pre-determined responses. Therefore, the use of open-ended questions not only aligns with the researcher's epistemological stance but also allows for the later development of an interview schedule that is grounded within the participants' data. As responses by participants were on average a few sentences in length, the TA process was completed much quicker. TA can be a useful analysis when working with smaller data sets, as well as those collected from open-ended questions from a survey (Swart, 2019). This would usually be a long process with larger data sets and is described in further detail in *Phase two: Analysis* section of this paper. As a result, less detail is provided in this section to reflect the time taken to complete the analysis.

Stage 1: Familiarisation of data. Responses were initially read and re-read for familiarity. Initial ideas, thoughts, reflections, points of interest and notes were documented.

Stage 2: Coding. Initial production of codes started with the researcher interacting with the data, making notes on specific characteristics of the data, and beginning to attach labels and meaning related to potential themes

Stage 3: Search for themes. Potential codes were collated into tentative themes and data that was relevant to these themes was gathered.

Stage 4: Review themes. Themes were checked with the researcher's supervisors (TS & RSF) to see if they worked with the chosen extracts as well as within the entire data set. A table of themes was produced to collate this information.

Stage 5: Define themes. Further discussions took place around the label of themes and agreement was made with supervisors to ensure that labels reflected the themes.

Stage 6: Writing report. Final themes were collated, matched with extracts, and presented within the paper. These themes were then used to inform the development of questions for the interview schedule used within phase two of this study. Discussions with

research supervisors (TS, RSF) explored how these themes can be captured through questions within the interview schedule.

Semantic approach

A semantic approach to analysis is seen as the "explicit and surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written" (Braun & Clarke, 2006, p. 13). With a semantic approach, themes are detected at surface level, with the researcher not aiming to go beyond what is said. This allowed for patterns within the data to be collated and organised into a coherent and summarised set of themes. Within this research phase, a semantic approach was useful as the researcher could theorise around the broader meaning of patterns found from open-question responses from the survey. These patterns were then used to inform discussions and later development of the interview schedule for phase two of the research.

Mixed Inductive/Deductive analysis

An inductive/deductive analysis approach involves the code of data with some preconceived or predetermined themes based upon previous experience or theory (Boyatzis, 1998). The approach is both theory and data-driven and seeks to discover new interpretations and ideas from the data through the process of analysis and integration of previous knowledge. A "good" code is described by Boyatzis as capturing the qualitative richness of the phenomenon being studied. Stating that a mixed approach was used is important within research as this will have an impact upon how themes are theorised and later presented within research. Both inductive and deductive analysis is common within qualitative research across not only TA but also grounded theory (Strauss & Corbin, 1997). However, unlike grounded theory, TA aims to present a story or narrative from the themes and codes that are grounded within the data, rather than produce a theory to answer the research aims/questions (Thomas, 2006). Whilst Braun and Clarke (2006) identified that researchers can never fully strike the balance between, pre-conceptions, theoretical and epistemological position, and data-driven ideas, identifying these and maintaining transparency can minimise this.

Reflexivity

A diary was kept through the process of analysis within both phases of this research study. For further details of this, please see Phase two analysis.

Phase two: Qualitative methodology

Consent

Participants who had completed the online survey and provided contact details had agreed to be considered for interviews. Those who were eligible for interviews were sent an information sheet and consent form via email. Once the consent forms were completed, they were forwarded back to the researcher and stored securely on the university server. Participants also gave verbal consent to be interviewed at the start of their interview with the researcher and this was recorded either via Dictaphone or the online communication platform. Due to COVID-19 restrictions, face-to-face interviews could not be carried out. Therefore, participants were offered an interview via telephone or using an online platform (Zoom, MS Team).

Selection of participants

First participants who did not opt-in for an interview were removed. Scores across a selection of the psychometrics (See Table 13) were ordered and split into four quartiles, producing ranges of scores for each group.

Table 13

Quartile ranges for psychometrics

	Quartile Ranges			
	GAD-7	**PHQ-9**	**PCL-5**	**SCS-R**
Very High (n=3)	=>11	=>14	=>33	=<61
High (n=4)	3-10	5-13	11-32	62-85
Low (n=1)	1-2	1-4	2-10	86-98
Very Low (n=3)	0	0	0-1	=>99

Following this, scores for the GAD-7 and the PHQ-9 were computed on SPSS using the *select cases – if condition is satisfied* function, using the corresponding range of scores for each quartile. Following this, the scores for the PCL-5 and then the SCS-R scores were added to the command function.

Once a final pool of interviewees for each quartile was chosen, individuals were sorted by demographic categories (sex, military branch, age) by hand. A spread of individuals across all of these characteristics was selected to ensure the best variability across the sample. It was aimed for the sex and military branch to be representative within each quartile (where possible) and age to be represented across the whole interview sample, with at least one

individual from each decade range (i.e. 20-29 years old). For individuals who matched across demographics and could not be split further, one was allocated for an interview in the first instance and the other was allocated as a reserve interview. If sex, military branch, or age were solely represented within their quartile group, these were prioritized for an interview to ensure representation.

A breakdown of participant selection for an interview can be found in Figure. 5. This highlights at what stages participants were eliminated at each stage that psychometric scores and demographic information were applied to the four quartile groups.

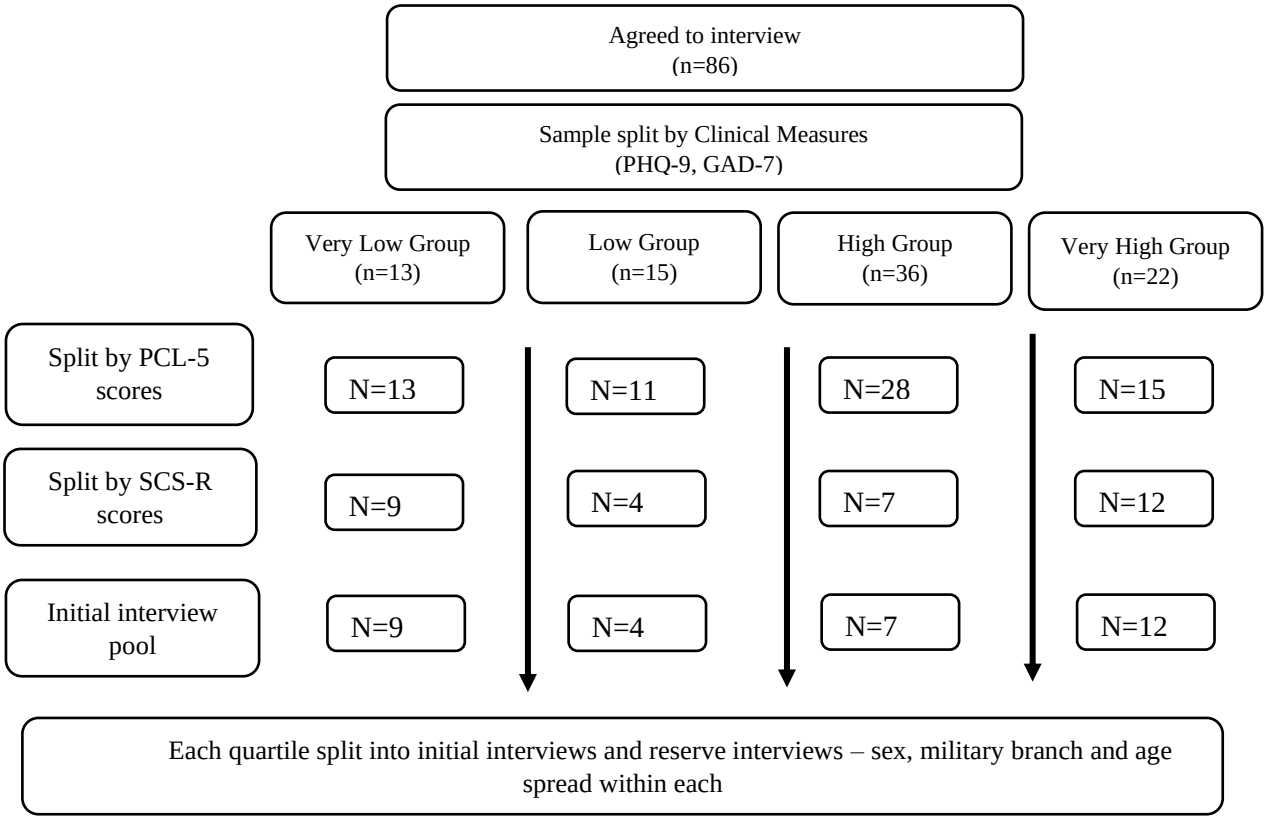


Figure 5

Process for selecting participants for interview

A final breakdown of the interview pool for each quartile can be found in Table 14.

Table 14

Participant demographic information within each quartile for an interview and reserve interview

		Very Low		Low		High		Very High	
		Interviews (n=6)	**Reserved (n=3)**	**Interviews (n=3)**	**Reserved (n=1)**	**Interviews (n=5)**	**Reserved (n=2)**	**Interviews (n=9)**	**Reserved (n=3)**
Sex	Males	5	3	2	1	3	2	6	3
	Females	1	0	1	0	2	0	3	0
Age Range									
	20-29	1	0	0	0	0	0	1	0
	30-39	1	0	0	1	1	1	2	0
	40-49	1	0	1	0	0	0	5	0
	50-59	2	1	0	0	1	0	0	3
	60-69	1	1	1	0	3	1	1	0
	70-79	0	1	1	0	0	0	0	0
Military Branch									
	British Army	4	0	3	0	1	1	6	3
	Royal Navy	1	1	0	0	1	0	2	0
	Royal Air Force	1	2	0	1	3	1	1	0

Whilst every effort was taken to achieve a spread sample, some participants either did not respond to emails/telephone calls or had chosen not to continue participation within the study and therefore all demographics could not be captured within the sample.

Kappa – Development of the 'Impact' Likert scale

Responses from the question '*What impact has the COVID-19 lockdown had on your life?* were used to help differentiate between individuals who would be offered an interview in the first instance, and those who would be for reserve interview. Those for reserve interviews matched their counterpart across all score groups as characteristics (as described above). To utilise these responses, the data from the question were first imported into an excel spreadsheet. A 5-point Likert scale was then created by the researcher to allow responses to be quantified. The 5-points included the following: *No impact, minimal impact, moderate impact, substantial impact, and extreme impact.* These labels were checked with both research supervisors to ensure that they were sufficiently distinct from each other. Following this, the researcher then rated all the responses to the question using the Likert scale. The scale was then sent to both supervisors along with a random selection of twenty responses each (both different sets). Supervisors were asked to score their twenty responses using the 5-point scale (See *Cohen's weighted kappa* section in Extended results). These responses were then used to calculate agreement levels, as well as a weighted kappa score to determine if they were a reliable means of measuring the impact of participants responses. In addition to this, scores were used to differentiate between if an individual would be selected for an interview first or be considered as a reserve interview.

Sample size

Within the literature, guidance for sample size within thematic analysis can largely vary and often presents as conflicting or non-specific (Fugard & Potts, 2015). One approach to determining whether a satisfying sample size is to consider 'theoretical saturation'(Glaser, 1965), a term used to describe when a researcher has continued sampling and analysing and no new data has emerged. However previous literature has reported this number to be incredibly varied, with a little as six (Giesler & Juarez, 2019) and as many as twenty (Bird, 2005). A difficulty with this is that there is no clear guidance around when a researcher can confidently stop collected further data. It could subsequently be argued that data saturation cannot ever be achieved as each experience is unique and therefore to identify a fixed amount

of participants would both reduce the reported experiences as well as limit the possibility for further discoveries (Wray et al., 2007). Vasileiou et al. (2018) argued that sample size alone is not sufficient and that 'data adequacy' should be explored. This involves collecting data from a diverse range of sources that capture the variations in the phenomena. Researchers are asked how best they can gain access to the comprehensiveness of the population being studied and best meet their aims (Morrow, 2005). Trustworthiness of research may not come from carrying out comprehensive sampling strategies (i.e. large numbers of interviews), but instead from selecting experiences that map the variation within the phenomenon (Levitt, 2015)

A sample of 10-15 participants was therefore chosen for this study, as this not only aimed to strike a balance between suggestions from previous literature but also allowed for a breadth of experiences to be explored within the interview pool, across all quartile groups of difficulties. Additionally, this set realistic expectations for individuals to agree to be interviewed, as attrition rates can be high within veteran qualitative studies (Bush et al., 2013)

Interviews schedule development

Themes and sub-themes generated from the analysis of survey responses were then used to create the final interview schedule. Discussions took place with supervisors around ways in which the themes could be encapsulated within questions that capture individual experiences within the interview. Care was taken to ensure that all themes/sub-themes were included within the schedule and relevant prompts were provided to elicit responses from participants. Once the interview schedule was finished, it was re-submitted to the Nottingham University Ethics committee for approval, to which it was given.

The interview schedule (See Appendix IX) included questions aimed to unpack and explore the experiences of the participants. Prompts were provided for the interviewer to help participants elaborate and give as much detail as possible. With this being said, the interview needed to be carried out flexibly rather than sequentially; allowing for a reduced likelihood of the researcher importing ideas into the conversation, as well as a greater chance to develop rapport (Joffe, 2012)

Interview procedures

The interview schedule designed from phase one of the study was used with all eleven participants (see Appendix IX). Interviews were conducted in a semi-structured way, in that the questions were used as a guide, with relevant prompts to aid the researcher with exploring responses to questions. All interviews within this study were carried out by the author and were conducted remotely. Three interviews were carried out over the telephone, two using Microsoft Teams, five using Zoom, and one using Webex.

For those interviewed over the telephone, interviews were recorded via Dictaphone. For interviews carried out over online platforms, these were recorded securely using the individual programme and saved within a secure file. As a backup, these interviews were also recorded via Dictaphone. Participants were offered the option for the call to be audio or video, depending on their personal preference. If participants had no preference, a video call was encouraged to help with engagement during the interview.

Interview transcripts

Transcription. Interviews were transcribed via the University of Nottingham *Automated Transcription Service.* This involved uploading audio files to the secure server for transcription and then downloading a completed file with the interview data. Downloaded transcripts were copied into word documents, password protected and stored within a secure file. Transcripts were then checked manually by the author for errors before commencing analysis.

Data protection. The *Automated Transcription Service* is a secure platform developed by the University of Nottingham. Data processed, produced, and stored by the service was within the EU and fully met GDPR data protection legislation. Once transcripts are complete and downloaded from the platform, these along with the original audio are automatically deleted after 90 days.

Reflective thematic analysis

Extraction of data. Interview data from each participant were imported into NVivo 12 software for analysis. From here, the stages of thematic analysis were carried out, with sub-folders created for each stage.

Semantic analysis. A semantic approach was used for the analysis of the interviews within this phase of the study. The development of themes, therefore, involved interpretation and analysis that was descriptive and explicit in exploring the meaning of the data. In their more recent review of thematic analysis, Braun and Clarke (2020) discussed how semantic level analysis should be explicit and capture insights into an individuals' perceptions. This can be achieved through the creation and conceptualisation of themes. As thematic analysis is advocated as a flexible and reflexive approach, this was held in mind during analysis and reflected upon within the reflective journal as well as with discussions with supervisors.

Mixed Inductive/Deductive analysis. Much like phase one of the study, a mixed approach was taken with the data. This involved identifying themes that were grounded within the data as well informed and influenced by the results of phase one of the study. This was related to the explorative nature of the research aims and allowed for the emergence of new and interesting ideas from the analysis, grounded within both phases of the study.

Stages of analysis:

Stage 1: Familiarisation of data. To become familiar with the interviews, all transcripts were checked for accuracy alongside the recordings, and then re-read for clarity several times. This was to become familiar with the data and start to distinguish between participants and generate initial ideas of interest. It was also important during this phase to ensure that the transcripts retained the correct information from the verbal accounts in a way that it remains 'true' to its nature and context (Poland, 2002).

Stage 2: Coding. All interviews were coded with initial ideas of interest noted. Codes were directly linked to the data as well as informed by the results of phase one analysis. This involved generating initial codes. An example of this can be found in Appendix XI.

A reflective log was kept through the analysis to not only check codes but also ensure that initial ideas were recorded and integrated with preconceived ideas from phase one of the study. This is synonymous with a critical realist stance, as it allows it allows for the transformational bridge between experience and previous learning (Sutherland, 2013). The use of a log allowed me to become more aware of the process and integrate pre-existing interpretations where possible.

Stage 3: Search for themes. Initial codes were then collated and organised into potential themes. This was an ongoing process and involved re-grouping codes until salient themes emerged.

Stage 4: Review themes. Themes were then cross-referenced with the data to ensure that they were represented by participants through the use of quotes. Initial themes were then collated into a table with sub-themes and illustrative quotes and discussed with the author's supervisors (TS). This discussion involved reviewing the names of the themes to ensure that extracts were relevant and salient.

Stage 5: Define themes. The final themes were then defined after discussions with both supervisors (TS & RSF) and a thematic map was constructed to illustrative the narrative that emerged from the data.

Stage 6: Writing report. The final themes were then selected with corresponding data extracts and reported to reflect the research aims.

Extended Results

This section outlines the results from the two phases of the study. The first phase will present participant information and descriptive statistics, assumption testing, results of Cohen's weighted kappa, qualitative analysis of survey responses and further correlational analysis. The second phase will present a qualitative analysis of the interviews with participants, supplementary quotes, and themes and sub-themes not included within the journal paper.

Phase 1: Survey

Participant Characteristics

Table 15

Participant Characteristics

		Survey Respondents (n=130)
Age	Mean (SD)	53.1 (11.8)
	Range	27-80
Sex	Male	112 (86.2%)
	Female	18 (13.8%)
Marital status	Single	8 (6.2%)
	Married	85 (65.4%)
	In a relationship	15 (11.5%)
	Engaged	3 (2.3%)
	Separated	1 (0.8%)
	Divorced	13 (10%)
	Widowed	4 (3.1%)
Military branch	British Army	90 (69.2%)
	Royal Navy	12 (9.2%)
	Royal Air Force	27 (20.8%)
Years of service	Mean (SD)	15.3 (9.0)
	Range	2-40
Discharge circumstances	Normal service leaver	87 (66.9%)
	Early service leaver	42 (32.3%)
Employment Status	Full-time	81 (62.3%)
	Part-time	12 (9.2%)
	None	36 (27.7%)
	Prefer not to say	1 (0.8%)
Years since discharge	Mean (SD)	19.1 (13.0)
	Range	1-52
Previously contracted COVID	Yes, confirmed by test	6 (4.6%)
	Suspected, but not confirmed by test	16 (12.3%)
	Unsure	3 (2.3%)
	No	105 (80.8%)

The online survey was completed by 130 participants (Table 15). Years since discharge varied across the sample, with some leaving the British Armed Forces ranging from 1 year ago, up to 52 years; with a large portion leaving under normal circumstances (66.9%). Within the sample, 84% did not meet the criteria for PTSD as measured by the PCL-5 (scores <33), with 2% meeting partial criteria (33-37) and 14 % meeting the criteria under DSM-V criteria (=>38). With regards to clinical measures, 58% of the sample reported mild depressive symptoms on the PHQ-9 and 50% mild anxiety symptoms on the GAD-7. 97% of the sample did not meet the threshold for Coronavirus anxiety as measured by the CAS. Details of participants' residency can be found in Appendix XII

Descriptive Statistics

The overall sample reported predominantly mild symptoms of depression (PHQ-9) and anxiety (GAD-7) and almost no coronavirus related anxiety symptoms (CAS). Acceptance was seen as the most used coping strategy from the Brief-COPE, as well as Humour. PCL-5 subscales showed that Arousal and Negative Alterations in Cognition and Mood were more commonly reported within the sample.

Cronbach's Alpha and Internal Consistency

Cronbach's alpha is the most widely used statistic used within research to demonstrate that scales and psychometrics are fit for purpose (Taber, 2018). As the reliability of items on a scale aims to accurately measure a particular construct, it is important to test the objectivity of data collected (Quansah, 2017). Assessment instruments in psychology aim to be a single construct (often referred to as unidimensional). The dimension of a measure is essential for interpreting final scores (Widhiarso & Ravand, 2014). Therefore, researchers need to ensure that previous literature has explored constructs and measures, as those which are multidimensional will provide inflated reliability scores. Whilst establishing unidimensionality is difficult, researchers can be more confident when items on the scale are homogenous and previous studies have identified this (Graham, 2006).

Cronbach's alpha is expressed as a number between 0 and 1 and is seen to measure internal consistency (Cronbach, 1951). Internal consistency is described as the interrelatedness of a sample of items on a test (Tavakol & Denmick, 2011). Field (2013) suggested that the overall reliability of a questionnaire is indicated with an alpha value of 0.8 and above is considered good. A score of 0.7 and above is considered good for tests of ability.

Assumption Testing

Histograms. A visual assessment of the histograms showed that only the Emotion-focused Coping scale appeared normally distributed. However assessing histograms alone is not seen to be sufficient for determining the normality of data and therefore further testing was necessary (Holgersson, 2006)

Shapiro-Wilk Test. The assumption for Shapiro-Wilk was only met for the Emotion-focused Coping scale (p >.05) with all others were not normally distributed.

Skew and Kurtosis. Results (Table 16) indicate that from the variables, only two appeared normally distributed (Emotion-focused Coping and Problem-focused Strategies).

Table 16

Skew and Kurtosis values

Variable	Sample size	Skew	Skew SE	Z Skew	Kurtosis	Kurtosis SE	Z Kurtosis
SCS-R	130	-.503	.212	-2.372	-.161	.422	-.382
PHQ-9	130	.952	.212	4.491	.138	.422	0.327
GAD-7	130	1.007	.212	4.75	.168	.422	0.398
PCL-5	130	1.379	.212	6.505	1.254	.422	2.972
CAS	130	3.486	.212	16.443	12.747	.422	30.206
EFC	130	-.322	.212	-1.519	-.102	.422	-.242
PFS	130	.355	.212	1.675	-.702	.422	-1.664
DS	130	1.162	.212	5.481	1.244	.422	2.948

Note: SCS=Social Connectedness Scale Revised PHQ-9= Patient Health Questionnaire-9; GAD-7= Generalised Anxiety Scale-7; CAS=Coronavirus Anxiety Scale; PCL-5=PTSD Checklist for DSM-V; SE=Standard Error

Conclusions

As the assumptions for normality were violated across almost all of the variables, it was suitable to select a non-parametric correlation test to analyse the data.

Further Correlation Analysis

Analysis of PCL-5 subtypes and social connectedness. Further correlations were carried out exploring sub-types of the PCL-5 (see Table 17), there was a strong negative correlation between SCS-R scores and Negative Alterations in Cognition and Mood (r_s =-.72, p=<.001) and Alterations in Reactivity and Arousal (r_s =-.66, p=<.001).

Table 17

Spearman's correlations between social connectedness and sub-types of PCL-5

Variable	SCS-R	Intrusions	Avoidance	NACM	AR
SCS-R	-	.55**	-.47**	-.72**	-.66**
		[.418, .659]	[-.594, -.325]	[-.793, -.626]	[-.747, -.551]

Note. n=130 [95% Confidence interval based on 130 samples]; ; NACM=Negative Alterations in Cognition and Mood; AR=Alterations in Reactivity and Arousal

***P<.001 for* two-tailed correlations

Analysis of PCL Scores and Dysfunctional Coping Strategies. Correlations were carried out between PCL total scores and sub-scales of the Dysfunctional Strategies scale (Table 18). There was found to be a moderate positive correlation between PCL Scores and behavioural disengagement (r_s =-.57, p=<.001), Self-blame (r_s =-.2, p=<.001) and Venting (r_s =-.50, p=<.001).

Table 18

Spearman's correlations between PCL-5 and sub-scales of Dysfunctional Strategies

Variable	PCL-5	BD	Self-Blame	Venting	Denial	Substance Use
PCL-5	-	.57**	.52**	.50**	.25**	.30**
		[.442, .675]	[.383, .635]	[.135, .448]	[.082, .404]	[.135, .448]

Note. n=130; BD= Behavioural disengagement; **P<.01 for two-tailed correlations

Cohen's Weighted Kappa

Responses to the question *'What impact has the COVID-19 lockdown had on your life?'* were rated by the researchers; with responses from the researcher and each of their supervisors (RSF; TS) separately for 20 responses. Summarising agreement levels can help identify the level at which two raters are accurate (Viera & Garrett, 2005). Agreement level can be calculated by dividing the number of matched responses by the total number of ratings. Agreement between the lead researcher (DB) was 70% (Researcher & RSF) and 80% (Researcher & TS). Table 19 further breaks down the differences in ratings between the lead researcher and their two supervisors.

Table 19

Agreement rating between researcher and supervisors for the question: 'What impact has the COVID-19 lockdown had on your life?

	Rater (RSF)					
Rater (DB)	**No impact**	**Minimal impact**	**Moderate impact**	**Substantial impact**	**Extreme impact**	**Total**
No impact	4	0	0	0	0	4
Minimal impact	0	5	2	0	0	7
Moderate impact	0	0	3	2	0	5
Substantial impact	0	0	0	2	2	4
Extreme impact	0	0	0	0	0	0
Total	4	5	5	4	2	**20**
	Rater (TS)					
Rater (DB)	**No impact**	**Minimal impact**	**Moderate impact**	**Substantial impact**	**Extreme impact**	**Total**
No impact	2	0	0	0	0	2
Minimal impact	0	3	2	0	0	5
Moderate impact	0	0	6	1	0	7
Substantial impact	0	0	1	5	0	6
Extreme impact	0	0	0	0	0	0
Total	2	3	9	6	0	**20**

Kappa values were interpreted in line with Altman et al. (1991) categorisation of the strength of agreement (Table 20 below.)

Table 20

Strength of agreement and values of K (Altman et al., 1991)

Value of *K*	**Strength of agreement**
< 0.20	Poor
0.21 - 0.40	Fair
0.41 - 0.60	Moderate
0.61 - 0.80	Good
0.81 - 1.00	Very good

Calculation of Cohen's linear weighted kappa yielded scores of $\kappa = .761$ (95% CI, .590 to .932), $p < .0005$ and $\kappa = .762$ (95% CI, .561 to .963) respectively, indicating a good level of agreement (Altman, 1991).

Survey responses – Analysis

Results from the phase one TA analysis are included within the extended results section. This was due to the word count for the journal paper as well as the function of the analysis, in that, it was carried out to produce themes that would inform the development of the interview

schedule in phase two of the study. The results of these are summarised in the journal paper for the readers understanding.

Living through the pandemic. This theme described the components of moving through the pandemic for participants, and what factors they identified as related to the pandemic.

Motivation/effort

Motivation and effort were seen as diminished, with individuals reporting how engaging in everyday tasks was a difficult endeavour:

‘Things are more effort’

‘More effort to keep self busy’

This motivation seemed to have shifted significantly since before the pandemic and was being directly impacted by the ongoing restrictions. This was also reflected as a difficulty within everyday living, with individuals struggling to find reasons to put in the effort and engage with tasks, or even leave the house:

‘Life seems a lot less necessary now. There is little incentive to try.’

I don’t have anything to get up for, I can’t go out,

One individual expressed their frustration with the lockdown and how the lockdown had reduced their motivation to even seek out help from others, despite knowing that they have difficulties and would benefit from support:

‘I am still having problems from Covid 19 in March. No one is interested and it took huge effort to ask for help in the first place. The fear of dying alone at home is real

The longevity of this impact is also seen within responses, with individuals reporting motivation and effort continuing to fluctuate.

Government guidance/following guidelines

Individuals had strong views around the imposing of restrictions across the UK with regards to wearing masks, handwashing and protecting others. Government guidance was seen as functional for some to protect family:

> ‘Aware of the proximity of people, use of masks and increased handwashing, more so to protect my wife.’

Negative perceptions of the government were also present with some participants and this was a surprise to them. These individuals did not agree with the government advice and went further to describe it as potentially damaging:

> ‘Can't now believe the negative advice coming from government’

Following the rules was difficult for some and this could contribute towards mental health difficulties, particularly if these were prominent before the lockdown:

> ‘My mental health issues make me feel like this normally, but having to follow COVID rules in shops and what the government says, going out enhances the way I feel’

Changes to coping strategies

A large proportion of responses identified how old coping strategies were no longer accessible due to restrictions and organisations being closed. This disrupted routines for individuals and in some cases had an impact on their mental health:

> ‘They shut the gym which helped me deal with my mental health issues loads better. Even though things have reopened I have trouble going because I struggle with changes of routine’

> ‘Because I have no coping method now’

Coping was also seen to have a social component, which when taken away contributed towards difficulties. Socialising, in particular, was a healthy outlet for some and with the closing of public places, this had extinguished opportunities for this entirely:

‘I have no friends or social life and with the gyms closing no coping method.’

In contrast, some individuals were able to access other means of coping by utilising the resources they had during the lockdown. This adaptability allowed individuals to shift their focus away from what they could no longer do and more toward what they had access to and what benefits it could bring them:

> ‘Although I do not suffer from any post-traumatic stress or anxiety issues, I do enjoy spending time with friends and family to cope with my stressful job as a Care home assistant practitioner and student nurses.’

Connecting with others

Changes to personal relationships

Social relationships were valuable during the lockdown and individuals were able to both embrace the time they had with those they lived with or felt the loss of being isolated alone. Those of were with others received more regular contact and this increased level of connectedness:

> ‘Due to restrictions, I have found some comfort and happiness spending lots of time with my family.’

Being away from family/friends was seen as an opportunity to realise how valuable these relationships were. Some reported a new appreciation for the relationships they had and how they had realised this as they were now limited:

> ‘Separation from family and friends made me appreciate what I had more.*’*

However, in some cases, individuals reported the difficulties of being isolated with partners/loved ones and the impact on the relationship. Prolonged periods with family, for some presented as an ongoing challenge and this was starting to have a negative impact:

> ‘My wife is moaning more than usual and that is affecting our relationship.’

> ‘I don't like people anymore’

Social restrictions

The limiting of social contact was widely seen as negative across participants, as the level of social contact had decreased dramatically during the lockdown:

‘Feeling of being cut off especially from family.’

‘I had a much more active social life before’

‘I have no friends or social life’

‘Less socialising with friends and family’

As this social isolation continued, the impact was felt on a personal level, with some feeling disconnected from not only individuals but society:

‘Feel more disconnected from society’

‘Isolation leading to feelings of disconnect.’

Having a substantial amount of time at home allowed individuals to reflect upon what was missing within their social life and what things used to be like before. This was not always helpful for some as this led to rumination or focussing upon the negative aspects of their experiences:

‘Stuck at home....Alone.... Stuck on my own. Had a life before.... Now nothing. Stuck at home alone.’

‘Just the sense of being restricted and unable to actually DO anything that might help ease the mental issues’

Changes to psychological state

Mood changes

Participants reported significant mood changes during lockdown with anxiety, anger and stress increasing:

‘Little things easily get the better of me and I get angry. ‘

‘Increases stress’

‘My anxiety has increased, and I leave the house very very little’

Some participants experienced ‘dips’ within their mood and this led to the development of fears about the future. This negative outlook would continue to impact their mood on a day-to-day basis:

‘This has lowered my mood.’

‘The fear of dying alone at home is real.’

New feelings emerging

As well as old feelings resurfacing, some participants began experiencing new feelings both towards others and themselves, which they attributed to the lockdown experience:

‘My wife is moaning more and more due to this Covid19. I am beginning to despise and resent her as I am being blamed for things that are beyond my control.’

Some individuals reported feelings of frustration, boredom and keeping busy; something they had not struggled with before, perhaps due to access to a wide range of resources:

‘Find myself very bored and frustrated compared to before’

The role of thoughts

Having an excess amount of time during lockdown provided participants opportunities to be left alone with their thoughts:

‘I have had a lot more time to think and reflect on life in general.’

Whilst this was positive for some, for others who had previous traumatic experiences, there were more opportunities to think over details of this. As some individuals had been

managing with these experiences by keeping themselves busy, having this taken away had left them with opportunities to reflect upon negative experiences and thoughts:

'Extra time has let my mind drag up events I'd sooner forget'

Summary

Living through the pandemic was the most reported theme, with motivation, government guidance, and changes to coping strategies the most prominent reported difficulties. As the UK restrictions have forced individuals to adapt in new ways, this was not always successful, and some found themselves facing new struggles with few ways of managing this. *Connecting with others* was also seen as an important aspect of the pandemic thus far, as social contact had been significantly limited for many. For some, the restrictions have begun to change their relationships, and for others, the few relationships they had that were important and meaningful could not be accessed to keep them well. There were also notable *changes to the psychological state* of participants, with new, negative feelings emerging, thoughts becoming problematic, and mood shifting more regularly.

Phase 2: Interviews

Interview Sample Demographics

Further participant demographics can be found in Table 21.

Table 21

Participant demographics

	N	Mean (SD)	Range
Age	-	52.1 (14.0)	8-77
Sex		-	
Male	10 (90.9%)		
Female	1 (9.1%)		
Military Branch			
British Army	6 (54.5%)		
Royal Navy	3 (27.3%)		
Royal Air Force	2 (18.2%)		
Years of Service	-	15.3 (13.4)	3-40
Discharge Circumstances		-	
Normal Service Leaver	9 (81.8%)		
Early Service Leaver	2 (18.2%)		
Years since Discharge	-	17 (10.7)	1-35

Descriptive Statistics – Interview Sample

Descriptive statistics for quartile psychometric scores can be found in Table 22.

Table 22

Descriptive statistics for psychometric scores for quartiles

Quartile Group	N	Mean (SD)	Range
Very High	3	-	-
GAD-7	-	13.3 (2.5)	11-16
PHQ-9	-	20 (4.4)	18-25
PCL-5	-	52.3 (11.7)	42-65
SCS-R	-	42.3 (16.7)	25-57
High	4	-	-
GAD-7	-	6 (1.2)	5-7
PHQ-9	-	8.8 (1.0)	8-10
PCL-5	-	17.8 (4.4)	14.21
SCS-R	-	74.3 (12.5)	62-85
Low	1	-	-
GAD-7	-	2 (-)	-
PHQ-9	-	3 (-)	-
PCL-5	-	5 (-)	-
SCS-R	-	87 (-)	-
Very Low	3	-	-
GAD-7	-	0 (0)	0
PHQ-9	-	0 (0)	0
PCL-5	-	0.3 (0.6)	0-1
SCS-R	-	107.7 (8.1)	99-115

Thematic Analysis Results

The need for social connection. This section provides further quotes to support the main results section as well as elaborate on sub-themes that were not included in the journal paper.

Social media and technology to connect

This theme describes how technology and social media could be used as a replacement for face-to-face contact during the restrictions. This theme describes re-establishing and remaining connected with others via social media as well as the option of using technology to maintain communication with others, how access to this can be problematic and ways in which this compares to physical social contact.

The use of technology (i.e. video calling) was an already established means of connecting with others for some participants. As a result, they were able to utilise this more when severe social restrictions were in place, and could continue to have meaningful contact similar to face to face:

> I think I have always video called my Nan or my Grandad anyway, I video call my friends every so often, so again, that's not anything I'm doing…. I've not…. I've always done in there because I'm that close to them. I've always kept in contact with them. (Violet)

For others, there was a level of adjustment involved with using technology, particularly around family events and holidays:

> We [family] spoke on Christmas Eve. We spoke Boxing Day and then my youngest does the normal and puts photos on Facebook. So, I get to see the little man enjoying his day, but, it's not quite the same as going down there and bumming around the days before Christmas and actually physically buying them something they want for Christmas (Dave)

Whilst participants could acknowledge that some aspects of face to face contact were missing, the use of video helped bridge the gap for some of these, allowing individuals to physically see others rather than just hear their voice.

> I still keep in contact with a lot of my friends on like Facebook and WhatsApp and Messenger kinda stuff. The thing is that I'm not really a big drinker anyway, so I'm not downtown every Friday, Saturday night as such, probably more going out for a meal or something. Or a nice pub. So, in that respect that's not affecting me you see. (Grant)

Importance of physical socialisation

Some participants identified that whilst they enjoyed the limited contact they had with people when socially distancing, this was insufficient as it did not allow for enough time to have a meaningful and engaging interaction:

> Social interaction. Even though you get that at work, it's only for…. I mean, I get into work in the morning at 6:15 and I'll leave at 14:30 except for Friday I finish at 12. So, you do meet people, but because I'm in the front of house, I'm not actually teaching or anything. You see them for a short period of time. You'll see the tutors as they come into the staff office. Normally, when you go out, for example, when we go out on a Friday night with good friends down here, we will go out, we'll meet them at 6:00 o'clock say, and by the time we get home, it's half 9, so it's a good 4-hour discussion about the world, you know. (Joey)

Face to face interaction was described as an essential part of the socialisation process for some:

> I'm in my girlfriend's support bubble so I've been able to access it that way. My friends, not so much. We will touch base but it's not….over the phone conversation is not the same as face to face, you know? (Gareth)

Longevity within an interaction was important, as well as proximity, as it allowed for more meaningful conversations to occur. This was evident in some individual's personal lives, whereby dedicating an amount of time for meaningful conversation and socialisation was valuable. As the pandemic has almost extinguished this during lockdowns, socially distanced interaction was the only alternative. Whilst this provided some connection this was not as effective. This was not only with family, friends and loved ones but also with acquaintances and those participants interacted within regularly:

> We [work client] always used to shake hands, take the Mickey out of one another. This morning there were none of that. I gave him…made him a coffee and gave him some cake. But you missed all of that. So, I mean, it's not… that's how you form relationships by being, you know, friendly and open with people (Joey)

However, some individuals described no desire to be physically around others, with a preference for virtual contact instead:

> [How you access social contact] Through skype that kind of thing, and I play Xbox as well. Like if there's a party and they're all online, we can just say connected that way as well. That's enough for me. (Logan)

This appeared to satisfy the 'closeness' required from social interaction, but without the need to be physically close.

Social bubbles were able to provide some physical contact with others, for those who wanted it, and whilst this was a step in the right direction for some, others were left feeling unsatisfied:

> Being at home alone really because my daughters live, well…one lives 20 minutes away another 30 minutes away, my youngest lives nearby and she's actually in my bubble so I do get to see her once a week, but I don't have a great deal contact with face-to-face contact with it because she's a carer for autistic adults. (Joshua)

Adapting is key. This section provides further supporting quotes to elaborate on the main results section as well as provide details of sub-themes that were not included in the journal paper due to having more universal qualities rather than veteran specific.

Changes to coping

Some participants expressed how old coping strategies seemed to fail during the lockdown and there was a need to try and 'push through' the situation. However, despite this, some were left feeling that things weren't going to change for the foreseeable future:

> I've just honestly grinded through it. It's just the best way to cope with it. I'd go for runs on a lunchtime to break the day up with things, but that just don't seem to help. So, I've just grinded through it and I'm just going to keep doing it until it's over really. I can't really seem to get out of it. I don't see any other way of changing it. Everything is the same no matter what you do. (Logan)

Therefore, recognising the need to have functional coping strategies was essential for getting from day-to-day; especially when the future was unknown:

> I think it's been not knowing what's happening. that gets to me, it's the not knowing when it's never going to end, and you can't make plans. You can't look forward. You just kind go from day by day and it's monotonous. So that's what I think gets to me. But generally, I try and try and do a bit like baking which keeps me busy (Violet)

It was also important to notice any emerging unhelpful strategies, and actively make changes to reduce them significantly if they become problematic:

> I think I found myself drinking a lot more. I've literally stopped drinking this one because I've realised how much I've been putting away…. (Gareth)

Participants who were more active in adapting their coping strategies and recognised that there was a strong need to find new ways of coping found more success as the lockdown progressed:

> I just know that I'll if I don't do things, I'll just sit here. I'll start worrying about things and I'll just end up getting depressed and then anxious and anxiety will creep in and I'll just get back to where I was a few years ago…So that's why I sort of started baking… anything just finding something to do so. So, I wasn't sitting there just thinking about rubbish really. (Joshua)

Some participants were able to notice that some of their previous coping strategies, which had served them well for many years, were no longer helpful during the lockdown. This realisation was important for establishing a healthy life balance whilst being at home, as well as preventing behaviours such as excessive drinking from continuing:

> So actually, being able to notice and actually sit back and think "God, I can't believe I've had such a crap day. What's the first thing I should do? Neck a bottle of wine! It's not healthy, it's not functional…I've realised I don't need to. I'm not drinking this month. (Gareth)

Role of routines

Adapting to routines was protective for some participants as it kept them mentally well, engaged and focused upon what they were doing each day. This template could then be applied to a multitude of situations for each individual and what they wanted their day to consist of or what they had access to during the lockdown:

> It's a routine that's important, especially with fitness. Get a protein shake down you, go on the spin bike. Do your routine on the spin bike for a couple of hours. Have another protein shake. Have a bit of a rest, get your weight bench out, you know, easily do chest, bi's, tri's, shoulders, abs, you know. Just do something you know. (Grant)

Additional ideas around motivation were highlighted with one participant. With a lack of routine came difficulties staying motivated. Routines appeared to have been a protective component whilst serving within the military and allowed the individual to complete their everyday work with few difficulties:

> Just no routine. I've really struggled with that. With not having a routine, I've struggled in motivation with work. My whole drive, that's taken a massive knock. Just getting up and going, like straight away working in the same place every day. Yeah, that's what I'd say I've struggled with mainly. (Logan)

There appeared to be a reciprocal role with both routine and motivation, where more motivation led to reporting more regular routines in their lives and vice-e-versa.

Overcoming Barriers to being at home

This theme appeared to describe universal barriers faced by individuals whilst being restricted at home rather than specific difficulties that present within the veteran population. Therefore, this has been explored in this extended section.

It was evident from participants across all groups that extended time at home came with its difficulties and ways of managing this. Managing boredom was particularly difficult with restrictions placed upon where an individual could go and what they could do:

> Just keep yourself busy really and that was the main thing was keeping myself busy. Took up baking things. Thought I'll give it a go. All the time when I was doing something, I was fine. (Joshua)

Identifying what was missing from an individual's routine was key for then adapting to address this need. Some participants were willing to be flexible and creative in their approaches to managing boredom:

> I'm getting into a boredom state which is quite dangerous I don't like. I'm normally quite active. To such an extent that I've actually applied for a job. I've applied for a temporary job and I'm, about two-thirds of the way through the recruitment process… (Mitchell)

Reaching out to others was seen as a helpful strategy for managing boredom and this did not have to involve activities or face to face contact. It was sufficient to engage in regular conversations with friends/family to keep socially active as individuals would have been before:

> I've got units all over the country. I mean we keep together so I'm not always bored, and you know, we catch up. Some friends I'll speak to weekly and some will send a silly picture so will get a reaction. Obviously, birthday messages, they will always get a message from me and I don't do just happy birthday mate. I have to do more than that because he doesn't see you often enough. I can at least put some effort in on your birthday. So, it's mainly kind of social media and phone for keeping in touch with people. (Dave)

An effort was required for the individual to recognise that their boredom could become problematic and then motivate themselves to do something about it. This adaptability

was interpreted as similar to military service in some cases, in that individuals were required to ‘problem-solve’ in a rapid and problem-focused way.

Working from home was also described as a new barrier for individuals; especially those who were used to regular face-to-face contact as part of their everyday job:

> Working from home, it's not something I'm good at. I need to be…have a routine and that kind of thing to keep myself, my mind occupied and that kind of thing. Yeah, I find it really difficult working. But I've got through it. You know. (Logan)

But this could be adapted to as the pandemic progressed. Participants explained how important it was to take the time to figure out what works within their routine whilst working at home and what doesn’t:

> I think it's just a way of…a different way of looking at things. So, as I say, my job entailed travelling extensively and meeting a lot of people. So, it's how you get around things like that. So, what, what have I been… I've been doing different things and you can fall into the trap of just having teams’ meetings and doing this and doing that, and I'll drop in trying to do things that are slightly different as well. So not just going straight for teams. Let's fix up something where I'm speaking to somebody on the phone and we're doing something different rather than just on a team’s call (Roger)

These seemingly little changes were seen to have a big impact in some cases and required minimal adaptation but with positive effects as the lockdown continued.

Spending more time at home for individuals would also mean more time spent with their partners/family nearby. For some this was an easy situation to adapt to despite it being a strange and unplanned situation:

> You learn to live with your immediate family because I've got my wife obviously with me and my boy is round the corner about 20 steps away from where we are. You learn to live with your family, a little more closer than what you would normally do in a normal situation. (Paul)

For others, there were some initial difficulties as individuals were spending significantly more time with their partners than before the pandemic:

> My wife has also been working from home, so that's a problem. Actually, it's probably the hardest thing because we now spend that, you know, more time together than we have done in our 35 years of marriage. So, you know, it's great, but it takes a little bit of adjustment and readjustment. So, my life is pretty much in this 8-foot by 8-foot box most of the day, video calls like this and you know, and lots of other things. (Roger)

However, whist this presented as an initial barrier for some, it eventually became the new norm. This suggests that regular social contact within this context can be beneficial in the longer term, even if this takes some level of adjustment; a skill that appears prevalent within the veteran sample.

Goal-orientated attitude

Whilst this theme was only identified by three participants (across three separate quartile groups), it does provide an interesting account of how goal planning can be a useful tool whilst adapting during the lockdowns.

Having goals and setting targets to work towards was seen as a positive and motivational action whilst in lockdown. Through having an extended period to reflect on the individuals' lives and what they value, they were able, in some cases, to make positive changes for the future:

> Definitely now more goal-orientated because things have been…erm…been taken off of us. After appreciating what you've got instead of moaning about what you've not got is appreciate what you have got and use that to your best advantage. (Grant)

This change involved focusing more on what could be achieved and less on what was restricted within their environment. Participants who were able to set personal goals and adopt a similar attitude to serving in the military produced more positive results:

> At the time I was doing…I had some money from work, and I was spending it on personal trainers and I was doing zoom lessons once a week with her so that that gave me something to focus on. That kind of proactive attitude kicked in quite quickly. It's gonna happen. Just get on with it and get through it. Set a goal and get it done (Joshua)

This was described as action-focused in nature and similar to time serving in the military, it was important to have a clear goal, set your mind to achieving it and then do it.

Little time was given to thinking about what was missing or what could not be achieved. For those who were able to do this, this had a positive effect on their mood, motivation and wellbeing. Some participants identified how they were able to go further than they had before and attributed this to time during the lockdown to set realistic goals and ensure that they stick to them:

> On a personal level, I've reassessed my professional goals and what I want to do professionally. So, I'm looking at going to flipping houses and renting them out at the minute. (Gareth)

One participant expressed their reluctance to set any goals, as they felt nothing would materialise; particularly with regards to accessing services for personal well-being:

> I can't be bothered, why should I? These people [other civilians] are the ones going to these places and getting in line to get these sessions and stopping other people getting there….so I find that really annoying. (Patrick)

This suggested that setting goals would not reduce frustration or disappointment and therefore it was easier to accept that things would not change.

Managing/overcoming Mental Health Barriers

Managing ongoing worry

Further supportive quotes are offered in this extended section, to elaborate points raised around intervening with worries. Worries would often be described alongside control and how accepting that you have little-to-no control within the pandemic situation would make worrying less prominent:

> I tend not to worry about things that I don't have control of. So, I tend to examine things and don't take….I don't take notice of things unless I do examine and find a reason for them or try and decide where this is coming from (Mitchell)

There was also a prominent sense of the 'unknown' whereby some participants felt that the future was too uncertain, and this further fuelled their worries. In some cases, developing knowledge about common worries (such as how virus' spread) was not comforting but instead contributed towards further distress for the individual:

> I suppose it's got worse is because it just doesn't seem to be ending. There's no light at the end of the tunnel. Nothing to look forward to at the moment is that makes sense,

> yeah? I suppose it doesn't help that I have a fair knowledge of things like viruses and that sort of thing…it plays on your mind and you don't know what to do about it (Patrick)

The military made me

Military Mentality

Further supportive quotes are offered in this extended section, to elaborate on points raised in the main results section. For some participants, believing there was going to be an end to the restrictions and that a sense of 'normality' would be achieved in the future was used as a vehicle for managing difficult mental health barriers. Those who felt a loss of control over their situation or without the necessary tools to maintain their wellbeing could rely upon the things they did have control over and could harness this through their military experience:

> Knowing that I've got…it's going to end at some point and things will go back to normal. I think a lot of people suffer from mental health issues and stuff like that. I can kind of see past all that and I can just say, right, what can I do to get myself through it? What can I change? What can I try and change rather than just letting it all get to my head and get upset about it and just give up? (Logan)

Since serving in the military, there appeared to be an engrained belief for participants to follow orders to achieve this 'normality', even if they did not agree with what was being advised, felt that it was a mistake or wanted things to be different:

> I'm a bit cynical when it comes to mask-wearing, but you do it cause that's what the government directed us to do. So, we do it. (Joey)

Participants would often become frustrated with others if they did not follow the rules, even if they did not agree with their enforcement. This was very much synonymous with taking orders from high ranking officers during service. By doing so, things would move forward much quicker and restrictions would lift if everyone simply 'did as they were told':

> Well, I wear the mask. The thing is, they've made it a law, haven't they? We've got to wear matching shops now, so I do it, I don't see the point, but I do it because it's the law. But in Tesco's the other day in the garage, some guy just walked in willy nilly.

> They still served him and everything. Surely, they should have kicked him out. (Patrick)

Pandemic comparable to time serving

Further supportive quotes are offered in this extended section, to elaborate on points raised in the main results section. As mentioned, behaviours and routines were identified during the pandemic as similar to serving:

> It was hard going, but not… I mean, we're used to doing… the normal on board a ship used to do between three and four weeks, either 21 days to 28 days at sea, 4 days alongside, so you knew that generally speaking, you got something to look forward to, and I think the first lockdown, you could say that because we've done an experience like it, you knew you had an aim. (Joey)

Restrictions were seen as a regular aspect of military life and therefore applying this to the pandemic was relatable and manageable:

> Well, the orders were stricter in the forces. I did tours in Germany, Ireland, Iraq, Ethiopia. You always get restrictions no matter what they are. But if you can go back to adapt and survive, you just adapt to the situation you're in at the time. (Paul)

Further to this, participants identified similarities with behaviours and routines that would make up their day during service and how civilians were starting to experience what they had experience for many years:

> It's been 12 months of everybody else living my life. (Dave)

Particular emphasis was placed upon the restricting of activities and how individuals could only do certain things at certain times:

> Just being restricted really. So certain times and, you know, the certain postings. A pretty good example, when I was on my two-year tour, you can't you can't do certain things. You can't go to certain places. So, it's just restrictions really (Joshua)

Civilians in comparison

This section provides further supporting quotes to support the main results section as well as elaborate on sub-themes that were not included in the journal paper. Civilians were not seen as taking the pandemic as seriously as the participants:

> Whereas I've seen a lot of other people who are lackadaisical in a world of their own and they don't see the seriousness of it. My younger sisters in particular and I just think I'm sure I wasn't that ditsy when I was that age and I just say to them…I try and instil stuff in them. I don't…. I try not to be like the adult, like ranting about stuff but I try and you know give them it like black and white (Violet)

Some found this difficult to manage as they would have little difficulties following the rules but could not understand why others either chose not to or could not understand their importance. Conveying this to civilians was equally as challenging as there was a worry of coming across as 'ranting' rather than explaining, suggesting a difference in interpersonal styles.

There was also a conflict between the military perspective and the behaviours witnessed by some of the participants. Whilst a large portion of the participants did not agree with the restrictions (i.e. use of masks, social distancing measures), they would follow orders regardless as that is what they were trained to do and in doing so, things would improve quicker:

> It just frustrates me. Just listen to what you've been told and get on with it and things will seem to be over quicker. It's frustrating. (Joshua)

Progression of the pandemic. This section describes the final stage whereby the veterans could make sense of their experience in the pandemic thus far and start to think about not only how their experience has changed but also what they would do in the future and if the future was positive or negative. This theme was not included in the journal paper partly due to the word limit, as well as aspects of the analysis showing insight into the universal experience of the pandemic.

Positives from the lockdown

All participants from the very low group were able to identify positives that came from the national lockdowns. This was despite in some cases there being significant struggles from the first lockdown to the third:

> I've managed to save a lot more money. Come out with a very nice car, actually. No, that's honestly the only thing I can think I've benefited from, saving a lot more money. But all I could think… I'm looking forward to, you know, getting life back to normal and like, you know, going to the pub, everything like that. (Logan)

One participant from the very high group also expressed how despite a lot of difficulties both mentally and physically, some positive could be identified when compared to if the lockdowns had not happened:

> I was running. I dropped 2 stone in weight. I felt really really good about myself. I was confident and physically it was the fittest I've felt probably since being in the Navy. Phenomenal. So that was a massive positive, I think. (Gareth)

The lockdown for some provided some much-needed time to change old habits and engaging in healthier behaviours as more time and effort were readily available:

> I just thought…with a thought we might be… problems going shopping and that I just bought a lot of diet meal replacement powders and protein powders. Just had them delivered and just use them. I think I've lost about 10 kilos and then stop smoking. Taking everything into account, this would have been much more positives than negatives really. (Grant)

For one participant the lockdown was the ideal 'social experiment' for testing out how he and his partner would handle spending more time together when he retires in the future:

> It's nice to be able to test it out if she [wife] likes it and see how are we going to be able to cope in retirement, and actually, we think we'll do pretty well really, so that's pretty good. (Roger)

For another participant, they could find no positives with the lockdown experience. This subsequently conflicted with their military training, in that they are trained to identify positives within situations. However, during the pandemic, this was difficult to achieve:

> We're sort of trained in the service to look for positives but there isn't any you know (Joey)

Changes to the lockdown experience

As the lockdown progressed from March 2020 onwards, individuals experienced each stage in different ways. Whilst some participants reported their experience to improve over time, others experienced negative changes, and some remained the same across all lockdowns.

Some of the individuals vocalised how easy they found the first lockdown:

> But I must say from a personal point of view, it's not been too bad at all because I'm relatively happy with my own company. So, it's not been a real deal for me. I can occupy my time both physically and mentally. (Mitchell)

They were able to manage relatively easily despite being asked to stay indoors fairly rapidly within the space of several weeks. This was further eased for those who had access to an outdoor space to socialise and combat the feeling of 'being trapped' inside their home:

> Yeah, first looked lockdown was better. I used… most of it was all through the summer. I could get out more and do things. It's not dark or grey at four o'clock in the afternoon. I could sit outside in the garden. I have a flat with a balcony and a garden. Opposite the balcony, I would chat to the next-door neighbour across the way. So, I was having a lot more contact in the first lockdown and a lot more freedom as well, so I was able to cut the ties. (Joshua)

In contrast, some participants found the first lockdown to be a challenge, as it came with uncertainty as to what to do, how to act and what was expected:

> The first lockdown, nobody knew what was going on. Damned if you do and damned if you don't. Everyone's going in blindfolded. (Gareth)

Extended periods alone were detrimental to some individuals as this gave them more time alone with their thoughts:

> If I've got nothing to do, I'll sit there and I'll focus over something dark, and then I'll start worrying about something else and other things come back. Then I'll start getting depressed again and I'm trying to do my best to avoid it. (Joshua)

Rumination could become problematic for some as it brought up previous trauma-related thoughts or perpetuated any pre-existing negative thoughts and beliefs; further impacting their mental wellbeing.

Progression towards the third lockdown was met with different responses, with some experiences not changing, and others becoming worse as time went on.

The third lockdown was seen as manageable and similar to the first by some:

> I don't think it's changed. I think we as a couple and as a household haven't changed anything. We've got his mother in our bubble now because she's on her own. But we've had that since June or July, whenever they said we have a bubble. So, nothing

else has really changed. But I can think of, like saying that, not really doing anything different. Like yeah, I can't say anything changed. We're still being as strict as we were on the 1st Lockdown, so nothing's changed. Not for us personally. (Violet)

However, others expressed how time has not improved their abilities to manage within lockdowns:

I think the first one, I was more pragmatic, and I think the second one I accepted it easier, but I was mainly… I think it was easier to accept because we thought it's just Christmas….we would be alright by Christmas. So there was that carrot again. So, the reason for the second one was to get to Christmas. Then when Christmas was a nonstarter and then we went into this current one I think is without a doubt the worst. (Joey)

Uncertainty appeared to become more damaging as the lockdowns progressed and by the third lockdown, some individuals were feeling lost and unable to see how things could improve moving forward:

I suppose it's got worse is because it just doesn't seem to be ending. There's no light at the end of the tunnel. Nothing to look forward to at the moment if that makes sense (Patrick)

Equally, as individuals' uncertainty towards the future increased, their motivation to engage or try to improve their situation became lesser:

I've lost a lot of motivation. I know that's not gotten any better. That's gone down and down. Other than that, no, not really. Yeah, I just lost the motivation to want to try harder with work (Logan)

Future outlook

The outlook for the future was mixed amongst participants. Those who were optimistic about the future were driven by their need to engage in activities they missed as well as socialising with others:

I have to say I'm forever the optimist, you know and even though I've been going through quite a lot of rubbish from my dad, you know and not being able to visit him and he's not well at all, I've got the optimism of the gym opening and socialising. (Joey)

Even with some individuals who had expressed less motivation to change moving forward, they described how things could only improve from this point onwards:

> I just see improvements really. I don't really see how it could possibly get any worse. Big heart for me. Yes, I'm going back to work on Monday, which I'm really happy about and you gotta push on from there really. So just a positive outlook, definitely. (Logan)

Optimism could be seen with individuals who believed that normality was an achievable state. Whilst there were currently inconsistencies with rules and things were appearing 'abnormal', there was a strong belief that these barriers would pass, and people would resume things to how they were pre-pandemic:

> I think people will just go back to normal in respect of that they won't care, and people won't be sitting there all the time. And I think eventually two or three years down the line I think they'll be like all, oh remember when we had that pandemic, kind of thing and it'll just be… It'll be like that. (Violet)

Whilst almost all participants were able to identify some level of optimism about the future, one was unable to see any real change to come:

> Can't see there being a post-pandemic life with all the other strains. Because they're just gonna be another one and another one and another one and another one. Eventually, it's going to get resistant to this vaccine, it's not going to work, and you can end up with another one that's going to come back anyway. It's very virulent this covid compared to other things. Spreads very quickly, so I wouldn't like to say whether or not any of this is gonna help. (Patrick)

This uncertainty for the future appeared to continue to cast doubts and fears of things becoming 'normal' again and for the individual this was unimaginable at this time. As this individual reported a prolonged period of distress through all of the lockdowns, it could be suggested that this negative outlook has become entrenched and reinforced through the continuation of restrictions, lack of social contact, and inability to access coping strategies that would have otherwise helped the individual manage.

Extended Discussion

Further findings

When examining the impact of COVID restrictions from an experiential perspective, the study provided a narrative around the challenges faced by veterans as the pandemic progressed. Social connectedness was described as the initial difficulty as restrictions tightened and long-standing social networks were reduced or extinguished altogether. This is understandable given that bonding with others is seen as a basic psychological need for maintaining wellbeing, especially within veteran populations (Fisher et al., 2015). Participants who had more access to resources to mobilise their behaviour (e.g. technology, their family within their social bubble) were more likely to access this state of mind or identity to not only make positive changes to their lockdown experience but begin to restructure their lives in the future. Adapting was then seen as imperative for surviving the pandemic, especially when there were no clear signs of when restrictions would lift or for how long. This adapting however appeared to be more universal rather than veteran-specific, with participants reporting the need to adapt their coping strategies, change their routines and adapt to being at home for extended periods (Gurvich et al., 2020). Furthermore, this adaptation was crucial when mental health difficulties became more prevalent, with strategies employed to combat worries and rumination, and individuals attempting to buffer the adverse effects of the restrictions (Hou et al., 2020). Military mentality appeared to aid with adapting, with individuals comparing this favourably to their prior experience.

Further examining sub-types of the PCL-5, we found that the strongest link was between negative alterations in cognitions and mood (NACM) and social connectedness. NACM can involve several problematic difficulties which can create barriers for individuals with PTSD to function consistently, as outlined in the DSM-V (American Psychiatric Association, 2013). Persistent negative emotional states such as anger, guilt and shame are often evident, as well as feelings of detachment from others, as seen in previous research whereby it has been suggested that there are positive associations between NACM and depression (Afzali et al., 2017). Individuals can also experience diminished interest in the participation in activities that were once significant to them. Given the restricted parameters of the lockdown and the inability to access helpful coping strategies (including regular social contact), it is unsurprising that individuals report diminished social connectedness with others alongside increasing symptoms of PTSD. Furthermore, individuals who display a persistent

inability to experience positive emotions are likely to become further entrenched due to the longevity of restrictions, the lack of/limited social contact and the parameters associated with this contact that makes connecting and bonding extremely difficult (i.e. online communication, social distancing).

The PCL-5 was also shown to be strongly associated with dysfunctional coping strategies. Examining subtypes of coping strategies, behavioural disengagement (BD) and self-blame were moderately associated. Skeffington et al. (2017) previously highlighted the prevalent role of maladaptive coping strategies such as BD and self-blame in PTSD symptomology. BD refers to a tendency to reduce efforts within certain situations, particularly when faced with challenges or difficulties (Thuen & Bru, 2004). With the pandemic imposing restrictions that create barriers to engagement, it is not surprising that participants who displayed more prominent PTSD symptoms would tend to disengage. The restrictions may have compounded this further as it provided less motivation for individuals to access or engage in positive and meaningful outlets to reduce their distress. BD has previously been described as a potential mediator between PTSD severity and trauma-related guilt (Held et al., 2011). Individuals with higher levels of guilt-related cognitions reported increased use of disengagement strategies (such as BD), which ultimately interfered with PTSD recovery and management. An individual can hold significant guilt from previous traumatic events, particularly those that are military-related (Norman et al., 2018). Participants who were isolated at home with no social support or network will have likely had more time to ruminate over these thoughts, further perpetuating their symptoms and increasing the employment of BD as a coping strategy. This poses a difficulty in the long-term, as individuals may become further entrenched due to the longevity of the pandemic, and whilst opportunities to engage with others and employ previous coping strategies will occur once restrictions are lifted, this may no longer be accessible to the individual.

Self-blame was also associated with PCL-5 scores, and whilst this has been suggested before within the PTSD literature (Startup et al., 2007) it can be contextualised differently due to the pandemic. Dialogue within the military often echoes ideas around ‘weakness’ when mental health difficulties are suggested (Vogt, 2011). For those who are experiencing even mild difficulties, this can trigger feelings of self-blame and low self-worth; being a reflection of their ability to cope with things rather than a result of their circumstances (Lorber & Garcia, 2010). This can lead to emotional suppression which can ultimately lead to exacerbation of symptoms and difficulties. Within phase two of the study, some participants

identified how they felt that had to "get on with things" and not give attention or weight to their difficulties. Whilst for some this can be achieved, for others, this was a struggle. Tackling issues of shame and self-blame are difficult during restrictions and opportunities to internalise these views can lead individuals to develop more severe symptoms. It is important to recognise that this process may occur with individuals as restrictions begin to lift as this will provide important factors that should be addressed first to engage individuals who are seeking help from services.

A further interesting finding from this study is that anxieties related to coronavirus were not seen across the majority of the sample, with few reporting any worries or concerns around the virus. Coronavirus anxiety or 'coronaphobia' has already been suggested as prevalent within the general population, accounting for major indications of psychological distress (Lee, Jobe, Mathis, et al., 2020). Individuals who are fearful and anxious about COVID-19 have reported physiological symptoms triggered by thoughts or information related to the disease (Evren et al., 2020). Coronaphobia has also shown to be strongly associated with increased generalised anxiety, depression, functional impairment and suicidal ideation (Lee, Jobe, & Mathis, 2020). However, in this study, worries or anxiety's that were present were not overly linked towards the COVID-19 virus, but more so around the restrictions and environmental changes that came with responding to the pandemic as a nation. This brought about social isolation, reduced behavioural engagement, and a need to adapt to the ongoing situation. Whilst the general population continue to report COVID-19 related difficulties (such as anxiety and depression), this appeared to be low within veterans, potentially due to the military mentality mechanism described previous, acting as a buffer and allowing individuals to be more problem-focused and less concerned with the potential complications of contracting COVID-19.

Contribution to the literature

This study offers confirming contributions to the literature, as well as novel ideas around military identity and the functioning of the veteran population during the pandemic.

Findings from phase one of the study provided supporting evidence suggesting that there is an association between social connectedness, anxiety, depression and PTSD symptomology within veterans. These co-morbidities are often described within the literature and given the increase of stressors brought about by the pandemic, it is not surprising that these continue to be found. This highlights the need to continue addressing these difficulties

post-pandemic, particularly with services that are offering mental health support for the veteran-specific population. Social connectedness has previously been discussed extensively with regards to transitioning into the community and reintegration. The pandemic has created social barriers for individuals, and whilst it was assumed that this would cause difficulties for the general population, we can see that connecting to others is of important intrinsic value for the veteran community. This is not just through peer networking and veteran support services, but family, friends and any individual who allows bonding and a sense of belonging to be experienced.

Further to this, phase two identified the role of specific factors that influence a veteran's experience during the pandemic; highlighting those which are specific to this population and those which are generalisable to the public. Within the military, collectivism is evident, with the sense of self de-individualised and reconstructed to form a collective effort and mentality. Whilst this can create cohesion and comradery within the population post-discharge, this can create difficulties, as individuals can struggle to re-acquainting themselves with their identity (Smith & True, 2014). From a theoretical standpoint, military identity can be expressed and explained through attitudes, values and culture within the population (Johansen et al., 2014). Zirker et al. (2008) highlighted that whilst military service is vocational, it comes with its own unique set of customs which individuals experience together, separate from civilians, and therefore the term 'veteran' can be a lifelong label and status. Understanding this identity has been important for addressing treatment barriers for veterans as there is often a "us and them" culture which makes intervention difficult. Results from this study identified the protective use of 'military mentality'; a mechanism which not only mobilise individuals to progress through the pandemic, but also help achieve positive outcomes. Interestingly, whilst not all participants reported positive changes through the pandemic or in some cases any changes at all, all did report this mentality being important. This was a detriment to some as it then created a conflict in which they could not progress forward even if they wanted to and were applying their previous experience to do so.

Clinical/Military Implications

This research highlights the unique experience veterans have faced and continue to face as the pandemic in the UK continues. Clinically this highlights areas for healthcare services to target the delivery of treatment in the future to ensure that newly formed barriers

do not restrict the individual from engaging, as well as allow professionals to understand the lived experience of the population.

As mentioned previously, the focus should be placed upon the military identity as a strength and a mechanism for resilience within the population. Military veterans can historically be difficult to engage within services for a multitude of reasons including stigma, negative attitudes towards healthcare, and practical issues with accessing support. Understanding the role of mentality and how this continues to be relevant post-discharge can inform professionals ways in which to engage veterans. As a practitioner, it is important to have a person-centred approach to working with individuals with mental health difficulties. This involves understanding their internal world, their beliefs, attitudes and how they function. The veteran population carries its own unique and important characteristics, meaning they require an individual approach compared to the general population. It is unclear as to when healthcare services will be able to fully resume face-to-face appointments and this potential barrier should also be considered. Whilst some individuals reported accessing other means of communicating with professionals (i.e. technology, video call), some were restricted either due to personal circumstances or difficulty with engaging with this platform. It would seem important to perhaps make individual clinical judgements for veterans to see if they're able to be seen face-to-face if they have no other means of contacting professionals. Extended periods alone and socially isolated will have had an impact on individuals, with some experiencing more severe difficulties than others. Having high expectations for some veterans to engage in virtual platforms to access support may not be suitable and therefore considering other options such as face-to-face (when it is safe and practical to do so) should be considered.

With regards to service development and delivery, the NHS five year forward view (NHS England, 2017) previously outlined the increased support for veterans and their families. This involved local transition, liaison, and treatment services to provide health, social care, and mental health needs, as well as upskill GP's in England to best serve the needs of this population. Whilst this is ongoing and due for review in 2023, it should now be noted the potential need to integrate findings to include the impact of the pandemic on the population. As services continue to expand and adapt to address the complex needs of the veteran population, there should now be more consideration around engagement and overcoming barriers to this. This may provide GP's with an important role of not only assessing individuals' difficulties but also referring to suitable services and providing a

coherent account of the difficulties within the referral. Referral details are important as services can be strict with their criteria for assessing individuals. The social difficulties that the pandemic has brought for some may be perceived as a lack of motivation to engage with services when in fact the longevity of the pandemic has created entrenched difficulties with functioning post-lockdown. Services should be sympathetic towards the needs of this population who are already, in some cases, difficult to engage.

Further to this, the Armed Forces Covenant continues to play a crucial role in the accessing of services by veterans. This should continue to be considered within services as the needs of veterans continue to evolve as the pandemic progresses. Individuals may likely face disadvantages due to engagement difficulties compared to the general public and this should be considered when veteran referrals are received to services. Recognising the value of the contribution the veteran population have made, healthcare should be flexible with their understanding of the population now and be willing to integrate new ideas for working with them moving forward.

Strengths and limitations

This study provided, to the author's knowledge, one of the first accounts of veteran's experiences during the COVID-19 pandemic within the UK, using a mixed-methods approach. It aimed to incorporate experiences from all branches of the UK military, rather than focus solely upon one individual branch. This was to begin to explore more common themes within the veteran population, which then potentially inform not only future research are around the impact of the pandemic, but also begin to identify clinical implications, and areas to consider as services start seeing individuals with potential post-pandemic difficulties.

As the study was explanatory, it took a stance of curious enquiry as opposed to aiming to confirm findings. A primary strength of explanatory research is in its ability to use quantitative data to establish areas for exploration, to then capitalise on the expertise of those who know, live and experience the social phenomena being studied using qualitative methods (Stebbins, 2001). Stebbins highlighted that when conducting explanatory research, the researcher should be willing to adapt their direction as a result of new data and emerging insights. The sequential explanatory design was used to not only allow the combining of quantitative and qualitative methodologies but also as a robust and adaptable blueprint for conducting phase two of the research. The results from the phase one survey not only informed the development of the interview schedule but also contributed towards the sample

selection for the interview. The principle components of phase two were generated from results found within the initial part of the study, and with this, they would be unsubstantiated. The researcher was able to use the results from the survey to adapt the interview schedule and develop meaningful questions to try and capture the experiences of the sample.

With regards to limitations, it should be acknowledged that substantial claims cannot be made from the correlational analysis within phase one of the study. As the data was not found to be distributed, non-parametric testing was carried out, and whilst this can be argued as robust as their parametric counterparts (Field, 2013), it should be acknowledged that the scores within the sample were skewed towards the lower end of the spectrum. From the sample overall, individuals were reporting fewer difficulties across clinical measures, coping and social connectedness. Whilst this is interesting in itself, this means we cannot make wide assumptions around those who were reporting more prominent difficulties, but instead can comment on the features of this, how some variables have associations with one another, and what this may mean. The use of phase two interviews did allow us to contextualise some of these scores and attempt to represent the population as accurately as possible, but of course, there is still room for error or to simply over-generalise to the wider population.

Difficulties can arise from the connecting of both phases of mixed methods research (Fetters, Curry & Creswell, 2013) in that this study used an online survey primarily to recruit for phase two interviews. Whilst the use of a participant-selection model is useful within mixed methods literature (May & Etkina, 2002), this does bring challenges in generalising beyond the initial phase one sample. Themes and sub-themes generated from qualitative analysis therefore cannot be guaranteed to be observed within the overall sample or wider population (Cantarelli, Belle, & Longo, 2020). This is further identified within phase one, whereby correlational analysis was carried out on the survey data. Correlational data can provide relationships between variables but cannot make assumptions around causation (Roher, 2018). As the interviews schedule was developed from the results of this analysis, alongside thematic analysis of qualitative responses, it cannot be guaranteed that the overall experiences of the cohort are represented within the questions and the subsequent interview sample. With a large portion of the sample displaying few symptoms of anxiety, depression, traumatic stress and coronavirus anxiety, this may have influenced the lines of enquiry within the interviews, and as a result, other experiences may not have been successfully captured. Whilst it is difficult to fully account for this, stratifying the interview sample using a single

measure from the survey would have reduced this likelihood and allowed for a more spread group of interviewees.

Also, it should be recognised that the use of cut-off scores for the PCL-5 was subjective and agreed as useful for this study. As discussed in the extended methodology, cut-off scores for the PCL-5 are debated with different studies both with veterans and non-veterans justifying different scores. For this study, a score was decided based upon the literature for veterans and then was used when splitting the interview sample. Whilst this may not have directly impacted upon the selection of participants or allocation to one of the quartiles, it may have influenced the researcher in approaching interviews with those from the *very high* group as all individuals met the criteria for PTSD. The justification for this score was outlined before interviews and appeared useful at the time. Considering this for future research would be beneficial as it may impact researchers' interpretations of data.

In addition to this, gender was not represented to the extent to which it was originally hoped by the researchers. This could be partly due to the distribution of the survey and its ability to capture female veterans, as well as within the interview stage, and females being filtered out inadvertently during the selection of participants. Female veteran representation is an ongoing difficulty within the literature (Ashley et al., 2017) and this study aimed to include more female representation within the sample. However, considering the wider context of the UK military, a 2019 population projection by the ministry of defence identified that the UK veteran population comprised of 10% females (Ministry of Defence, 2019). This, therefore, suggests that our study provides the minimum representation, though a more balanced gendered sample should be sought in future research.

Future research

At the time of writing, the current situation within the UK shows the restrictions with the lockdown to be easing, with individuals being given more opportunities and access to social contact, coping strategies, and means of addressing their difficulties. However, as this continues, likely, those who have struggled since March 2020 without an improvement through each lockdown may have difficulties as restrictions lift. Looking at the specific needs of this population within the context of a post-pandemic world may help shed some light upon ways in which services can offer social support as well as interventions. Equally, much like this study, there is value in exploring the experiences of those who have managed through the pandemic and can adapt once again to the changing landscape. Insight into these

experiences could shape the way we view the veteran population moving forward; a population that had always required different input from the general population due to their sense of shared experience, difficulties, and comradery.

Equally, capturing the effectiveness of current or proposed interventions for this population would be useful for creating an evidence base for interventions that are yet to be tested within the evolving climate. Since the restrictions placed upon face-to-face contact with services (both physical and mental health), practitioners have been creative in adapting their means of working with individuals (through the use of telephone and video platforms). From this research, some individuals have alluded to how accessible this was, or equally how much of a barrier it created. Services will likely continue to be flexible with this approach, but it is unclear as to how beneficial these methods will be for addressing the specific concerns of this population and evaluating and exploring these outcomes would be beneficial.

Reflective Section

This section of the thesis explores some of my reflections from the research process. As a whole, the project has been challenging. Since starting my clinical doctorate, I have unfortunately had to change projects on two occasions. Both were veteran projects but had a focus upon the transition period, what their experiences looked like and how it could be conceptualised in different ways. However, due to the ongoing COVID-19 crisis, recruitment became difficult. The inclusion criteria for these projects included veterans who were recently discharged from their military branch (up to three months). At the time of these projects, the UK was in the process of mobilising the armed forces to aid with difficulties in the health sector, including building the temporary COVID hospitals, supporting testing and later the rollout of the vaccine programme. As a result, there were fewer veterans discharged at this time, potentially due to wanting to stay on and support the public. This was a stressful time for me as a level of adaptability and a strong sense of calm was necessary to navigate these barriers. Whilst upon reflection, that was categorically the most stressful time during this doctorate, I can recognise how my research skills had continued to adapt, as I was required to not only develop a new project that had a personal interest, but also one which was clinically relevant, methodologically sound, and with a robust recruitment strategy and subsequent sample. The current project, therefore, is the culmination of immense effort, determination, and critical thought, and this is reflected through the following ways in which I have navigated the process.

Initial decisions around the selection of psychometric measures for the online survey involved numerous ongoing discussions with supervisors; particularly around the similarities between measures for individual constructs and rationale for final choices. Selecting a version of the PCL-5 was one of the more difficult decisions. Discussions with supervisors involved the importance of identifying single trauma versus multiple traumas, the impact upon the interview schedule, and the overall length of the measure were all components discussed. I had some concerns around using the PCL-5 with Criterion A as this only identifies a single trauma. This may have then influenced the later interview schedule and the subsequent analysis may not have captured the broad themes across the sample. This was important for the aims of this research and therefore made for a justifiable reason to exclude the use of Criterion A. Additionally, I was mindful that the overall survey had to be accessible and easy to complete within a reasonable time frame. Therefore, adding unnecessary questions that did not meaningfully contribute towards the research aims was not helpful.

Reflecting upon the use of the CAS for measuring coronavirus-related anxiety, the timing for completing this may have impacted how we viewed the final sample and their scores. The online survey was distributed during the second lockdown in the UK. Many of the participants reported little-to-no anxiety-related symptoms as a result of the virus and therefore it is unclear as to if this is representative of the time scores were taken, or are reflective of individuals already adapting to their situation and therefore displaying fewer symptoms. This would be difficult to tease apart and whilst I acknowledge that to be certain about these results is never possible, it is important to consider this.

The use of language within the online survey was an element that I had not fully considered until this was pointed out by our veteran consultant. Before the launch of the survey, the term ‘Navy’ was used within the list of UK military branches. It was highlighted that this may alienate potential individuals who have served with the Navy as it is officially known as the ‘Royal Navy’, much like the ‘Royal Air Force’. It was unbeknown to me that this can be a contentious point with some, as there are conflicts between different military branches and how people refer to them. This was something I had never considered and upon reflection was an excellent lesson for researching this population. Also, this further supported the importance of recruiting a veteran to a consultation role as they were able to provide essential specialist knowledge which benefited the overall recruitment to the survey.

Thematic analysis was chosen for analysing the qualitative data from phase one of this study. However, it could be argued that content analysis may have been a more appropriate choice. Before the dissemination of the online survey, it was expected that participants would provide more lengthy and detailed responses. However, from the results, we found much shorter responses; some were a few sentences long, and others simply a few words. As the aim of this section of the analysis was to inform the development of the interview schedule, TA was not necessary to achieve this. A content analysis would have been a much faster process and would have still allowed key ideas from participants to shape the interview questions. Given the length of responses, content analysis, in this instance, would have been relatively productive for reducing the time spent on analysis.

The sampling strategy used within this study for selecting participants for interviews, at the time, was developed to select a varied sample and therefore capturing a range of experiences. As clinical scores are often used to separate individuals into categories of severity, it was useful to start with these. Despite a large section of the survey sample reported minimal difficulties, it became even more essential to develop a strategy to capture those on the other end of the spectrum, even if they were few in numbers. It was hoped that systematically splitting the participants into groups based upon score ranges on psychometrics would provide a sufficient pool of participants. Whilst this was successful to a certain extent, a lot of potential interviewees were lost during this process. This left us with a reduced number of individuals to contact. Attrition rates are important to consider within research and considering this when developing my sampling strategy may have led to different decisions. As a result of attrition and sampling, one participant was interviewed for the *low* group. This may have been avoided perhaps using a different strategy (such as extreme sampling). However, this was difficult to predict and the decisions made at the time intended to gain a spread sample and it could be argued that this was partially achieved. Considering this in the future would be helpful for research and may be more beneficial when collecting a larger sample from the online survey.

The interview process was by far the most challenging aspect of this research for several key reasons. Firstly, the development of the interview schedule proved a difficult process as there was a need to incorporate all aspects of the phase one findings, whilst also having accessible questions and prompts to engage the interviewees. The final schedule was reviewed not only by both of my supervisors but also with the veteran consultant. However, once the time came for carrying out the interviews, I began to realise that some aspects were

not as accessible as I had hoped. Some of the questions appeared repetitive in that they would evoke similar responses from participants, with some even stating "you've already asked me that question". This suggests that whilst the aim was to explore different constructs, the wording of the questions was not always accurate. The use of a semi-structured interview was helpful as it allowed me to be flexible with my approach and re-shape some of the questions on an individual basis. However, I found that interview skills as a researcher and as a trainee clinical psychologist are very different. I had wrongly made assumptions that clinical interview skills were directly transferable and that I would be able to explore ideas with participants easily. I quickly realised this was not the case and found the first few interviews clunky at times and difficult to engage the participant. This was an important learning point for me as I have been able to practice my research interview skills and I now feel more prepared for future research. The use of a reflective journal was essential for tracking my thought process and improving my interview skills (See Appendix XIII).

The introduction of COVID restrictions meant that face-to-face interviews would not be possible and that adapting to other methods of communication were essential. I was initially sceptical about successfully engaging participants through methods other than face-to-face, but I was pleasantly surprised by my experience. I found many of the participants to be talkative, interested and we developed rapport much quicker than expected. This gave me confidence as the research continued. Participants were interviewed across a range of video platforms as well as over the phone, and a few of these created a particular barrier to engagement. However, for one individual, they identified that they only had access to a phone, and this was not their preferred method of communication. During their interview, they reported difficulties with understanding questions and getting comfortable with the conversation. I had wrongfully assumed that all participants would have access to a laptop, computer, or tablet so that video could be used. I was very much mistaken, and this is something I have reflected on significantly as it highlights my assumptions of others' circumstances, as well as my own and how I take these things for granted. Many of the individuals I interviewed face barriers within their life, and I had not considered using a phone as one of them. I am now more mindful of this, not just within veterans but the wider population.

COVID Impact Statement

Due to the ongoing pandemic, there have been several disruptions to this project. My initial thesis idea involved recruiting veterans who had recently been discharged from the military. However, due to the pandemic, the UK forces had delayed the discharge of military personnel and therefore recruitment was not possible. The project was then adapted as the first lockdown ended but still faced the same issues. This current project is the culmination of two previous attempts to recruit veterans; both unsuccessful due to the ongoing COVID-19 pandemic

References

Adamczyk-Sowa, M., Mado, H., Kubicka-Bączyk, K., Jaroszewicz, J., Sobala-Szczygieł, B., Bartman, W., & Sowa, P. (2021). SARS-CoV-2/COVID-19 in multiple sclerosis patients receiving disease-modifying therapy. *Clinical Neurology and Neurosurgery, 201*, 106451.

Adler, A. B., Zamorski, M., & Britt, T. W. (2011). The psychology of transition: Adapting to home after deployment. http://dx.doi.org/10.1037/12300-006

Afzali, M. H., Sunderland, M., Batterham, P. J., Carragher, N., Calear, A., & Slade, T. (2017). Network approach to the symptom-level association between alcohol use disorder and posttraumatic stress disorder. *Social Psychiatry and Psychiatric Epidemiology*, *52*(3), 329-339. http://dx.doi.org/10.1007/s00127-016-1331-3

Ahern, J., Worthen, M., Masters, J., Lippman, S. A., Ozer, E. J., & Moos, R. (2015). The challenges of Afghanistan and Iraq veterans' transition from military to civilian life and approaches to reconnection. *Plos One, 10*(7), e0128599. https://doi.org/http://dx.doi.org/10.1371/journal.pone.0128599

Albert, N. M., Trochelman, K., Meyer, K. H., & Nutter, B. (2009). Characteristics associated with racial disparities in illness beliefs of patients with heart failure. *Behavioral Medicine, 35*(4), 112-125. http://dx.doi.org/10.1080/08964280903334519

Allison, P. D. (2010). *Missing data*. Sage Thousand Oaks, CA.

Althouse, A. D. (2016). Adjust for multiple comparisons? It's not that simple. *The Annals of thoracic surgery, 101*(5), 1644-1645. https://doi.org/http://dx.doi.org/10.1016/j.athoracsur.2015.11.024

Altman, R., Alarcon, G., Appelrouth, D., Bloch, D., Borenstein, D., Brandt, K., Brown, C., Cooke, T., Daniel, W., & Feldman, D. (1991). The American College of Rheumatology criteria for the classification and reporting of osteoarthritis of the hip. *Arthritis & Rheumatism: Official Journal of the American College of Rheumatology, 34*(5), 505-514. http://dx.doi.org/10.1002/art.1780340502

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.

Amsalem, D., Dixon, L. B., & Neria, Y. (2021). The coronavirus disease 2019 (COVID-19) outbreak and mental health: current risks and recommended actions. *JAMA psychiatry, 78*(1), 9-10. http://doi:10.1001/jamapsychiatry.2020.1730

Armour, C., Tsai, J., Durham, T. A., Charak, R., Biehn, T. L., Elhai, J. D., & Pietrzak, R. H. (2015). Dimensional structure of DSM-5 posttraumatic stress symptoms: Support for a hybrid Anhedonia and Externalizing Behaviors model. *Journal of Psychiatric Research, 61*, 106-113. http://dx.doi.org/10.1016/j.jpsychires.2014.10.012

Ashley, W., Tapia, J., Constantine Brown, J. L., & Block, O. (2017). Don't fight like a girl: veteran preferences based on combat exposure and gender. *Affilia, 32*(2), 230-242.

Asmundson, G. J., Paluszek, M. M., Landry, C. A., Rachor, G. S., McKay, D., & Taylor, S. (2020). Do pre-existing anxiety-related and mood disorders differentially impact COVID-19 stress responses and coping? *Journal of Anxiety Disorders, 74*, 102271. https://doi.org/10.1016/j.janxdis.2020.102271

Austin, G., Calvert, T., Fasi, N., Fuimaono, R., Galt, T., Jackson, S., Lepaio, L., Liu, B., Ritchie, D., & Theis, N. (2020). Soldiering on only goes so far: How a qualitative study on Veteran loneliness in New Zealand influenced that support during COVID-

19 lockdown. *Journal of Military, Veteran and Family Health, 6*(S2), 60-69. http://dx.doi.org/10.3138/jmvfh-6.s2-CO19-0007

Avruch, K. (1998). *Culture & conflict resolution*. US Institute of Peace Press.

Balaratnasingam, S., & Janca, A. (2006). Mass hysteria revisited. *Current Opinion in Psychiatry, 19*(2), 171-174. http://dx.doi.org/10.1097/01.yco.0000214343.59872.7a

Barrett, J., Jarvis, G., Macdonald, H., Buchan, P., Tyrrell, S., & Lilford, R. (1990). Inconsistencies in clinical decisions in obstetrics. *The Lancet, 336*(8714), 549-551. http://dx.doi.org/10.1016/0020-7292(91)90825-P

Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: psychometric properties. *Journal of Consulting and Clinical Psychology, 56*(6), 893. http://dx.doi.org/10.1037/0022-006X.56.6.893

Berglund, P., & Heeringa, S. G. (2014). *Multiple imputation of missing data using SAS*. SAS Institute.

Bird, C. M. (2005). How I stopped dreading and learned to love transcription. *Qualitative inquiry, 11*(2), 226-248. http://dx.doi.org/10.1177/1077800404273413

Bisson, J. I., Cosgrove, S., Lewis, C., & Robert, N. P. (2015, Nov 26). Post-traumatic stress disorder. *Bmj, 351*, h6161. https://doi.org/10.1136/bmj.h6161

Bliese, P. D., Wright, K. M., Adler, A. B., Cabrera, O., Castro, C. A., & Hoge, C. W. (2008). Validating the primary care posttraumatic stress disorder screen and the posttraumatic stress disorder checklist with soldiers returning from combat. *Journal of Consulting and Clinical Psychology, 76*(2), 272. http://doi.org/10.1037/0022-006X.76.2.272

Boden, M. T., Bonn-Miller, M. O., Vujanovic, A. A., & Drescher, K. D. (2012). A prospective investigation of changes in avoidant and active coping and posttraumatic stress disorder symptoms among military veterans. *Journal of Psychopathology and Behavioral Assessment, 34*(4), 433-439. http://dx.doi.org/10.1007/s10862-012-9293-6

Bovin, M. J., Marx, B. P., Weathers, F. W., Gallagher, M. W., Rodriguez, P., Schnurr, P. P., & Keane, T. M. (2016). Psychometric properties of the PTSD checklist for diagnostic and statistical manual of mental disorders–fifth edition (PCL-5) in veterans. *Psychological assessment, 28*(11), 1379.

Bowen, P., Rose, R., & Pilkington, A. (2017). Mixed methods-theory and practice. Sequential, explanatory approach. *International Journal of Quantitative and Qualitative Research Methods, 5*(2), 10-27.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. sage.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101. http://dx.doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589-597. http://dx.doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative research in psychology*, 1-25. http://dx.doi.org/10.1080/14780887.2020.1769238

Brewin, C. R., Garnett, R., & Andrews, B. (2011). Trauma, identity and mental health in UK military veterans. *Psychological Medicine, 41*(8), 1733. http://dx.doi.org/10.1017/S003329171000231X

Bridgland, V. M., Moeck, E. K., Green, D. M., Swain, T. L., Nayda, D. M., Matson, L. A., Hutchison, N. P., & Takarangi, M. K. (2021). Why the COVID-19 pandemic is a traumatic stressor. *Plos One, 16*(1), e0240146. http://doi.org/10.1371/journal.pone.0240146

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020, Mar 14). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet, 395*(10227), 912-920. https://doi.org/10.1016/s0140-6736(20)30460-8

Brown, R. (2000). Social identity theory: Past achievements, current problems and future challenges. *European journal of social psychology*, *30*(6), 745-778.

Bruce, M. L. (2010). Suicide risk and prevention in veteran populations. *Annals of the New York Academy of Sciences, 1208*(1), 98-103.

Bush, N. E., Sheppard, S. C., Fantelli, E., Bell, K. R., & Reger, M. A. (2013). Recruitment and attrition issues in military clinical trials and health research studies. *Military Medicine, 178*(11), 1157-1163. http://dx.doi.org/10.7205/MILMED-D-13-00234

Cantarelli, P., Belle, N., & Longo, F. (2020). Exploring the motivational bases of public mission-driven professions using a sequential-explanatory design. *Public Management Review*, *22*(10), 1535-1559.

Carver, C. S. (1997). You want to measure coping but your protocol'too long: Consider the brief cope. *International journal of behavioral medicine, 4*(1), 92-100. http://doi.org/10.1207/s15327558ijbm0401_6

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology*, *56*(2), 267. http://dx.doi.org/10.1037/0022-3514.56.2.267you

Choi, E., Lee, J., & Lee, S. A. (2020). Validation of the Korean version of the obsession with COVID-19 scale and the Coronavirus anxiety scale. *Death studies*, 1-7. https://doi.org/10.1080/07481187.2020.1833383

Clarke, R. A. (2008). *Against all enemies: Inside America's war on terror*. Simon and Schuster.

Clarkson, P., Giebel, C. M., Challis, D., Duthie, P., Barrett, A., & Lambert, H. (2016). Outcomes from a pilot psychological therapies service for UK military veterans. *Nursing open*, *3*(4), 227-235. http://dx.doi.org/10.1002/nop2.57

Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and psychological measurement, 20*(1), 37-46. http://dx.doi.org/10.1177/001316446002000104

Cohen, J. (1968). Weighted kappa: Nominal scale agreement provision for scaled disagreement or partial credit. *Psychological Bulletin, 70*(4), 213-220. https://doi.org/10.1037/h0026256

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155. http://dx.doi.org/10.1037/0033-2909.112.1.155

Cole, E. R. (2009). Intersectionality and research in psychology. *American psychologist, 64*(3), 170. http://dx.doi.org/10.1037/a0014564

Cramer, R. J., Braitman, A., Bryson, C. N., Long, M. M., & La Guardia, A. C. (2020). The Brief COPE: factor structure and associations with self-and other-directed aggression among emerging adults. *Evaluation & the health professions, 43*(2), 120-130. http://doi.org/ 10.1177/0163278719873698

Crenshaw, K. (2018). *Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics [1989]*. Routledge. http://dx.doi.org/10.4324/9780429499142-5

Creswell, J. W., Klassen, A. C., Plano Clark, V. L., & Smith, K. C. (2011). Best practices for mixed methods research in the health sciences. *Bethesda (Maryland): National Institutes of Health, 2013*, 541-545.

Creswell, J. W., Plano Clark, V. L., Gutmann, M., & Hanson, W. (2003). Advanced mixed methods research design. In *Handbook of mixed methods in social and behavioral research* (In A. Tashakkori and C. Teddle ed., pp. 209-240). Sage.

Danermark, B., Ekström, M., & Karlsson, J. C. (2019). *Explaining society: Critical realism in the social sciences*. Routledge.

Deaux, K. (1996). Social identification. In E. T. Higgins & A. W. Kruglanski (Eds.), Social psychology: Handbook of basic principles (p. 777–798). The Guilford Press.

Demers, A. (2011). When veterans return: The role of community in reintegration. *Journal of Loss and Trauma, 16*(2), 160-179. http://dx.doi.org/10.1080/15325024.2010.519281

Di Giuseppe, M., Zilcha-Mano, S., Prout, T. A., Perry, J. C., Orrù, G., & Conversano, C. (2020). Psychological impact of Coronavirus Disease 2019 among Italians during the first week of lockdown. *Frontiers in Psychiatry, 11*. http://dx.doi.org/10.3389/fpsyt.2020.576597

Dill, B. T., McLaughlin, A. E., & Nieves, A. D. (2007). Future directions of feminist research: Intersectionality. In *Handbook of feminist research* (In S.N. Hesse-Biber ed., pp. 629-637). Thousand Oaks, CA: Sage.

Duangdao, K. M., & Roesch, S. C. (2008). Coping with diabetes in adulthood: a meta-analysis. *Journal of behavioral medicine, 31*(4), 291-300. http://dx.doi.org/10.1007/s10865-008-9155-6

Dunkler, D., Haller, M., Oberbauer, R., & Heinze, G. (2020). To test or to estimate? P-values versus effect sizes. *Transplant International, 33*(1), 50-55. http://dx.doi.org/10.1111/tri.13535

Easton, G. (2010). Critical realism in case study research. *Industrial marketing management, 39*(1), 118-128. http://dx.doi.org/10.1016/j.indmarman.2008.06.004

Emmert-Streib, F., & Dehmer, M. (2019). Large-scale simultaneous inference with hypothesis testing: Multiple testing procedures in practice. *Machine Learning and Knowledge Extraction, 1*(2), 653-683. http://dx.doi.org/10.3390/make1020039

Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural equation modeling, 8*(3), 430-457. http://dx.doi.org/10.1207/S15328007SEM0803_5

Escolas, S. M., Pitts, B. L., Safer, M. A., & Bartone, P. T. (2013). The protective value of hardiness on military posttraumatic stress symptoms. *Military Psychology, 25*(2), 116-123. http://dx.doi.org/10.1037/h0094953

Evren, C., Evren, B., Dalbudak, E., Topcu, M., & Kutlu, N. (2020). Measuring anxiety related to COVID-19: A Turkish validation study of the Coronavirus Anxiety Scale. *Death studies*, 1-7. http://dx.doi.org/10.1080/07481187.2020.1774969

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior research methods, 41*(4), 1149-1160. http://dx.doi.org/10.3758/BRM.41.4.1149

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. International journal of qualitative methods, 5(1), 80-92. http://dx.doi.org/10.1177/160940690600500107

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. sage.

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs-principles and practices. *Health services research, 48*(6 Pt 2), 2134–2156. https://dx.doi.org/10.1111/1475-6773.12117

Fiorillo, A., & Gorwood, P. (2020). The consequences of the COVID-19 pandemic on mental health and implications for clinical practice. *European Psychiatry, 63*(1). http://dx.doi.org/10.1192/j.eurpsy.2020.35

Fisher, L. B., Overholser, J. C., Ridley, J., Braden, A., & Rosoff, C. (2015). From the outside looking in: Sense of belonging, depression, and suicide risk. *Psychiatry, 78*(1), 29-41. http://dx.doi.org/10.1080/00332747.2015.1015867

Fraser, E. (2017). Military veterans' experiences of NHS mental health services. *Journal of Public Mental Health*. http://dx.doi.org/10.1108/JPMH-06-2016-0028

Fried, E. I., van Borkulo, C. D., Cramer, A. O., Boschloo, L., Schoevers, R. A., & Borsboom, D. (2017). Mental disorders as networks of problems: a review of recent insights. *Social Psychiatry and Psychiatric Epidemiology*, *52*(1), 1-10. http://dx.doi.org/10.1007/s00127-016-1319-z

Fugard, A. J., & Potts, H. W. (2015). Supporting thinking on sample sizes for thematic analyses: a quantitative tool. *International journal of social research methodology*, *18*(6), 669-684. http://dx.doi.org/10.1080/13645579.2015.1005453

Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of COVID-19 and physical distancing: the need for prevention and early intervention. *Jama Internal Medicine*, *180*(6), 817-818. http://dx.doi.org/10.1001/jamainternmed.2020.1562

Gelman, A., Hill, J., & Yajima, M. (2012). Why we (usually) don't have to worry about multiple comparisons. *Journal of Research on Educational Effectiveness*, *5*(2), 189-211. http://dx.doi.org/10.1080/19345747.2011.618213

Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, *10*(2), 486. http://dx.doi.org/10.5812/ijem.3505

Giesler, M., & Juarez, A. (2019). "I Have Served to Tell": A Qualitative Study of Veterans' Reactions on Participating in a Living Library Project. *Journal of Veterans Studies*, *5*(1).

Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social problems, 12*(4), 436-445. http://dx.doi.org/10.1525/sp.1965.12.4.03a00070

Golec de Zavala, A., Federico, C. M., Sedikides, C., Guerra, R., Lantos, D., Mroziński, B., Cypryańska, M., & Baran, T. (2019). Low self-esteem predicts out-group derogation via collective narcissism, but this relationship is obscured by in-group satisfaction. *Journal of Personality and Social Psychology,* 119(3), 741-764. http://dx.doi.org/10.1037/pspp0000260

Gough, B., & Madill, A. (2012). Subjectivity in psychological science: From problem to prospect. *Psychological methods, 17*(3), 374. http://dx.doi.org/10.1037/a0029313

Graham, J. M. (2006). Congeneric and (essentially) tau-equivalent estimates of score reliability: What they are and how to use them. Educational and psychological measurement, 66(6), 930-944. https://dx.doi.org/10.1177%2F0013164406288165

Greden, J. F., Valenstein, M., Spinner, J., Blow, A., Gorman, L. A., Dalack, G. W., Marcus, S., & Kees, M. (2010). Buddy-to-Buddy, a citizen soldier peer support program to counteract stigma, PTSD, depression, and suicide. http://dx.doi.org/10.1111/j.1749-6632.2010.05719.x

Greenaway, K. H., Louis, W. R., Parker, S. L., Kalokerinos, E. K., Smith, J. R., & Terry, D. J. (2015). Measures of coping for psychological well-being. In *Measures of personality and social psychological constructs* (pp. 322-351). Elsevier.

Groarke, J. M., Berry, E., Graham-Wisener, L., McKenna-Plumley, P. E., McGlinchey, E., & Armour, C. (2020). Loneliness in the UK during the COVID-19 pandemic: Cross-sectional results from the COVID-19 Psychological Wellbeing Study. *Plos One, 15*(9), e0239698.

Grupe, D. W., Hushek, B. A., Davis, K., Schoen, A. J., Wielgosz, J., Nitschke, J. B., & Davidson, R. J. (2019). Elevated perceived threat is associated with reduced hippocampal volume in combat veterans. *Scientific Reports, 9*(1), 1-10. http://dx.doi.org/10.1038/s41598-019-51533-x

Guo, J., Feng, X. L., Wang, X. H., & van IJzendoorn, M. H. (2020). Coping with COVID-19: Exposure to COVID-19 and negative impact on livelihood predict elevated mental health problems in Chinese adults. *International Journal of Environmental Research and Public Health, 17*(11), 3857.

Gurvich, C., Thomas, N., Thomas, E. H., Hudaib, A.-R., Sood, L., Fabiatos, K., Sutton, K., Isaacs, A., Arunogiri, S., & Sharp, G. (2020). Coping styles and mental health in response to societal changes during the COVID-19 pandemic. *International Journal of Social Psychiatry*, https://doi.org/10.1177/0020764020961790

Haigh, F., Kemp, L., Bazeley, P., & Haigh, N. (2019). Developing a critical realist informed framework to explain how the human rights and social determinants of health relationship works. *Bmc Public Health, 19*(1), 1-12. http://dx.doi.org/10.1186/s12889-019-7760-7

Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: an overview and tutorial. *Tutorials in quantitative methods for psychology, 8*(1), 23. http://dx.doi.org/10.20982/tqmp.08.1.p023

Hanscom, D., Clawson, D. R., Porges, S. W., Bunnage, R., Aria, L., Lederman, S., Taylor, J., & Carter, C. S. (2020). Polyvagal and global cytokine theory of safety and threat Covid-19–plan B. *SciMedicine Journal, 2*, 9-27. http://dx.doi.org/10.28991/SciMedJ-2020-02-SI-2

Harding, S. (2017). Self-stigma and veteran culture. *Journal of Transcultural Nursing, 28*(5), 438-444. http://dx.doi.org/10.1177/1043659616676319

Harding, S., Sanipour, F., & Moss, T. (2014). Existence of benefit finding and posttraumatic growth in people treated for head and neck cancer: a systematic review. *PeerJ, 2*, e256. http://dx.doi.org/10.7717/peerj.256

Haslam, C., Cruwys, T., Haslam, S. A., & Jetten, J. (2015). Social connectedness and health. *Encyclopaedia of geropsychology*, 46-41. https://doi.org/10.1007/978-981-287-080-3_46-2

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine, 40*(2), 218-227. http://dx.doi.org/10.1007/s12160-010-9210-8

Hayes, S. C., Barnes-Holmes, D., & Wilson, K. G. (2012). Contextual behavioral science: Creating a science more adequate to the challenge of the human condition. *Journal of Contextual Behavioral Science, 1*(1-2), 1-16. http://dx.doi.org/10.1016/j.jcbs.2012.09.004

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour research and therapy, 44*(1), 1-25. http://dx.doi.org/10.1016/j.brat.2005.06.006

Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64*(6), 1152. http://dx.doi.org/10.1037/0022-006X.64.6.1152

Hazen, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*(3), 511-524.

Healy, M., & Perry, C. (2000). Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative market research: An international journal*. http://dx.doi.org/10.1108/13522750010333861

Held, P., Klassen, B. J., Coleman, J. A., Thompson, K., Rydberg, T. S., & Van Horn, R. (2020). Delivering Intensive PTSD Treatment Virtually: The Development of a 2-Week Intensive Cognitive Processing Therapy–Based Program in Response to COVID-19. *Cognitive and Behavioral Practice*. http://dx.doi.org/10.1016/j.cbpra.2020.09.002

Held, P., Owens, G. P., Schumm, J. A., Chard, K. M., & Hansel, J. E. (2011). Disengagement coping as a mediator between trauma-related guilt and PTSD severity. *Journal of Traumatic Stress, 24*(6), 708-715. http://dx.doi.org/10.1002/jts.20689

Ho, K. H., Chiang, V. C., & Leung, D. (2017). Hermeneutic phenomenological analysis: The 'possibility'beyond 'actuality' in thematic analysis. *Journal of advanced nursing, 73*(7), 1757-1766. http://dx.doi.org/10.1111/jan.13255

Hockey, J., & Higate, P. (2003). No more heroes: Masculinity in the infantry. *The Criminology of War*, 406f.

Hoge, C. W., Riviere, L. A., Wilk, J. E., Herrell, R. K., & Weathers, F. W. (2014). The prevalence of post-traumatic stress disorder (PTSD) in US combat soldiers: a head-to-head comparison of DSM-5 versus DSM-IV-TR symptom criteria with the PTSD checklist. *The Lancet Psychiatry, 1*(4), 269-277. http://dx.doi.org/10.1016/S2215-0366(14)70235-4

Holgersson, H. (2006). A graphical method for assessing multivariate normality. *Computational Statistics, 21*(1), 141-149.

Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., Ballard, C., Christensen, H., Silver, R. C., & Everall, I. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*. http://dx.doi.org/10.1016/S2215-0366(20)30168-1

Hoover, A., & Krishnamurti, S. (2010). Survey of college students' MP3 listening: Habits, safety issues, attitudes, and education. *American Journal of Audiology, 19*(1), 73-83. https://doi.org/10.1044/1059-0889(2010/08-0036)

Hou, W. K., Lai, F. T., Ben-Ezra, M., & Goodwin, R. (2020). Regularizing daily routines for mental health during and after the COVID-19 pandemic. *Journal of global health, 10*(2). https://doi.org/10.7189/jogh.10.020315

Houston, S. (2001). Beyond social constructionism: Critical realism and social work. *British journal of social work, 31*(6), 845-861. http://dx.doi.org/10.1093/bjsw/31.6.845

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice. *Field Methods, 18*(1), 3-20. https://doi.org/10.1177/1525822x05282260

Joffe, H. (2012). Thematic analysis. *Qualitative research methods in mental health and psychotherapy, 1*.

Johansen, R. B., Laberg, J. C., & Martinussen, M. (2014). Military identity as predictor of perceived military competence and skills. *Armed Forces & Society, 40*(3), 521-543. http://dx.doi.org/10.1177/0095327X13478405

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher, 33*(7), 14-26.

Jung, E., & Hecht, M. L. (2004). Elaborating the communication theory of identity: Identity gaps and communication outcomes. *Communication quarterly, 52*(3), 265-283. http://dx.doi.org/10.1080/01463370409370197

Kashdan, T. B., Morina, N., & Priebe, S. (2009). Post-traumatic stress disorder, social anxiety disorder, and depression in survivors of the Kosovo War: Experiential avoidance as a contributor to distress and quality of life. *Journal of Anxiety Disorders, 23*(2), 185-196. http://dx.doi.org/10.1016/j.janxdis.2008.06.006

Kelley, M. L., Bravo, A. J., Davies, R. L., Hamrick, H. C., Vinci, C., & Redman, J. C. (2019). Moral injury and suicidality among combat-wounded veterans: The moderating effects of social connectedness and self-compassion. *Psychological Trauma: Theory, Research, Practice, and Policy, 11*(6), 621.

Khan, S., Siddique, R., Li, H., Ali, A., Shereen, M. A., Bashir, N., & Xue, M. (2020). Impact of coronavirus outbreak on psychological health. *Journal of global health, 10*(1). http://dx.doi.org/10.7189/jogh.10.010331

Khazem, L. R., Law, K. C., Green, B. A., & Anestis, M. D. (2015). Examining the relationship between coping strategies and suicidal desire in a sample of United States military personnel. *Comprehensive Psychiatry, 57*, 2-9. http://dx.doi.org/10.1016/j.comppsych.2014.11.009

Kim, H.-Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restorative dentistry & endodontics, 38*(1), 52. http://dx.doi.org/10.5395/rde.2013.38.1.52

Kintzle, S., Barr, N., Corletto, G., & Castro, C. A. (2018). PTSD in US veterans: The role of social connectedness, combat experience and discharge. *Healthcare*. https://doi.org/10.3390/healthcare6030102

Kitchen, C. M. (2009). Nonparametric vs parametric tests of location in biomedical research. *American journal of ophthalmology, 147*(4), 571-572. http://dx.doi.org/10.1016/j.ajo.2008.06.031

Kohut, H. (1984). *How does analysis cure?* University of Chicago Press. http://dx.doi.org/10.7208/chicago/9780226006147.001.0001

Kolacz, J., Kovacic, K. K., & Porges, S. W. (2019). Traumatic stress and the autonomic brain-gut connection in development: Polyvagal theory as an integrative framework for psychosocial and gastrointestinal pathology. *Developmental psychobiology, 61*(5), 796-809. http://dx.doi.org/10.1002/dev.21852

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613. http://dx.doi.org/10.1046/j.1525-1497.2001.016009606.x

Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2010). The patient health questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. *General Hospital Psychiatry, 32*(4), 345-359. http://dx.doi.org/10.1016/j.genhosppsych.2010.03.006

Kumar, A., & Somani, A. (2020). Dealing with Corona virus anxiety and OCD. Asian Journal of Psychiatry, 51, 102053. https://dx.doi.org/10.1016/j.ajp.2020.102053

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.

Lee, E. J., Hall, L. A., & Moser, D. K. (2014). Psychometric properties of the Patient Health Questionnaire-9 in patients with heart failure and gastrointestinal symptoms. *Journal of nursing measurement, 22*(2), 29E-40E. http://dx.doi.org/10.1891/1061-3749.22.2.E29

Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. *Journal of Counseling Psychology, 48*(3), 310. http://dx.doi.org/10.1037/0022-0167.48.3.310

Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The social connectedness and the social assurance scales. *Journal of Counseling Psychology, 42*(2), 232. https://doi.org/10.1037/0022-0167.42.2.232

Lee, S. A. (2020). Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety. *Death studies, 44*(7), 393-401. http://dx.doi.org/10.1080/07481187.2020.1748481

Lee, S. A., Jobe, M. C., & Mathis, A. A. (2020). Mental health characteristics associated with dysfunctional coronavirus anxiety. *Psychological Medicine*, 1-2. http://dx.doi.org/10.1017/S003329172000121X

Lee, S. A., Jobe, M. C., Mathis, A. A., & Gibbons, J. A. (2020). Incremental validity of coronaphobia: Coronavirus anxiety explains depression, generalized anxiety, and death anxiety. *Journal of Anxiety Disorders, 74*, 102268. http://dx.doi.org/10.1016/j.janxdis.2020.102268

Lee, S. A., Mathis, A. A., Jobe, M. C., & Pappalardo, E. A. (2020). Clinically significant fear and anxiety of COVID-19: A psychometric examination of the Coronavirus Anxiety Scale. *Psychiatry Research, 290*, 113112. http://dc.doi.org/10.1016/j.psychres.2020.113112

Leedy, P., & Ormrod, J. (2010). What is research? *Practical research planning and design*, 1-11.

Levitt, H. M. (2015). Qualitative psychotherapy research: The journey so far and future directions. *Psychotherapy, 52*(1), 31. http://dx.doi.org/10.1037/a0037076

Louzon, S. A., Bossarte, R., McCarthy, J. F., & Katz, I. R. (2016). Does suicidal ideation as measured by the PHQ-9 predict suicide among VA patients? *Psychiatric Services, 67*(5), 517-522. http://dx.doi.org/10.1176/appi.ps.201500149

Lowe, P. A., Lee, S. W., Witteborg, K. M., Prichard, K. W., Luhr, M. E., Cullinan, C. M., Mildren, B. A., Raad, J. M., Cornelius, R. A., & Janik, M. (2008). The Test Anxiety Inventory for Children and Adolescents (TAICA) examination of the psychometric properties of a new multidimensional measure of test anxiety among elementary and secondary school students. *Journal of Psychoeducational Assessment, 26*(3), 215-230. https://doi.org/10.1177/0734282907303760

MacDonell, G. V., Bhullar, N., & Thorsteinsson, E. B. (2016). Depression, anxiety, and stress in partners of Australian combat veterans and military personnel: a comparison with Australian population norms. *PeerJ, 4*, e2373. http://dx.doi.org/10.7717/peerj.2373

Mahar, A. L., Rindlisbacher, C. R., Edgelow, M., Siddhpuria, S., Hallet, J., Rochon, P. A., & Cramm, H. (2021). COVID-19 and the Mental Health of Canadian Armed Forces Veterans: A Cross-Sectional Survey. *Military Medicine*. https://doi.org/10.1093/milmed/usab157

Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *The Lancet, 358*(9280), 483-488. http://dx.doi.org/10.1016/S0140-6736(01)05627-6

Manicas, P. T. (2009). Realist metatheory and qualitative methods. *Sociological Analysis, 3*(1), 31-46.

Mamun, M. A., & Griffiths, M. D. (2020). First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. Asian journal of psychiatry, 51, 102073. http://doi.org/ 10.1016/j.ajp.2020.102073

Martindale, S. L., Morissette, S. B., Kimbrel, N. A., Meyer, E. C., Kruse, M. I., Gulliver, S. B., & Dolan, S. L. (2016). Neuropsychological functioning, coping, and quality of life among returning war veterans. *Rehabilitation Psychology, 61*(3), 231. http://dx.doi.org/10.1037/rep0000076

May, D. B., & Etkina, E. (2002). College physics students' epistemological self-reflection and its relationship to conceptual learning. American Journal of Physics, 70(12), 1249–1258. http://dx.doi.org/10.1119/1.1503377.

Mazza, C., Ricci, E., Biondi, S., Colasanti, M., Ferracuti, S., Napoli, C., & Roma, P. (2020). A nationwide survey of psychological distress among Italian people during the COVID-19 pandemic: immediate psychological responses and associated factors. *International Journal of Environmental Research and Public Health, 17*(9), 3165. http://dx.doi.org/10.3390/ijerph17093165

McEvoy, P., & Richards, D. (2003). Critical realism: a way forward for evaluation research in nursing? *Journal of advanced nursing, 43*(4), 411-420. http://dx.doi.org/10.1046/j.1365-2648.2003.02730.x

McEvoy, P., & Richards, D. (2006). A critical realist rationale for using a combination of quantitative and qualitative methods. *Journal of research in nursing, 11*(1), 66-78. http://dx.doi.org/10.1177/1744987106060192

McManus, S., Meltzer, H., Brugha, T., Bebbington, P., & Jenkins, R. (2009). *Adult psychiatric morbidity in England: Results of a household survey*. Health and Social Care Information Centre.

Mellotte, H., Murphy, D., Rafferty, L., & Greenberg, N. (2017). Pathways into mental health care for UK veterans: a qualitative study. *European Journal of Psychotraumatology, 8*(1), 1389207. http://dx.doi.org/10.1080/20008198.2017.1389207

Meyer, E. G., Writer, B. W., & Brim, W. (2016, Mar). The Importance of Military Cultural Competence. *Curr Psychiatry Rep, 18*(3), 26. https://doi.org/10.1007/s11920-016-0662-9

Milanak, M. E., Gros, D. F., Magruder, K. M., Brawman-Mintzer, O., & Frueh, B. C. (2013). Prevalence and features of generalized anxiety disorder in Department of Veteran Affairs primary care settings. *Psychiatry Research*, *209*(2), 173-179. http://dx.doi.org/10.1016/j.psychres.2013.03.031

Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., Cannon, M., Correll, C. U., Byrne, L., & Carr, S. (2020). How mental health care should change as a consequence of the COVID-19 pandemic. *The Lancet Psychiatry*.

Moring, J. C., Dondanville, K. A., Fina, B. A., Hassija, C., Chard, K., Monson, C., LoSavio, S. T., Wells, S. Y., Morland, L. A., & Kaysen, D. (2020). Cognitive processing therapy for posttraumatic stress disorder via telehealth: Practical considerations

during the COVID-19 pandemic. *Journal of Traumatic Stress, 33*(4), 371-379. https://doi.org/10.1002/jts.22544

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250. http://dx.doi.org/10.1037/0022-0167.52.2.250

Mrug, S., & Windle, M. (2010). Prospective effects of violence exposure across multiple contexts on early adolescents' internalizing and externalizing problems. *Journal of Child Psychology and Psychiatry, 51*(8), 953-961. http://dx.doi.org/10.1111/j.1469-7610.2010.02222.x

Muldoon, O. (2020). Collective trauma. *Together apart: The psychology of COVID, 19*, 84-89.

Murphy, D., Ashwick, R., Palmer, E., & Busuttil, W. (2019). Describing the profile of a population of UK veterans seeking support for mental health difficulties. *Journal of Mental Health, 28*(6), 654-661. http://dx.doi.org/10.1080/09638237.2017.1385739

Murphy, D., Palmer, E., Lock, R., & Busuttil, W. (2017). Post-traumatic growth among the UK veterans following treatment for post-traumatic stress disorder. *BMJ Military Health, 163*(2), 140-145. http://dx.doi.org/10.1136/jramc-2016-000638

Murphy, D., Ross, J., Ashwick, R., Armour, C., & Busuttil, W. (2017). Exploring optimum cut-off scores to screen for probable posttraumatic stress disorder within a sample of UK treatment-seeking veterans. *European Journal of Psychotraumatology, 8*(1), 1398001. http://dx.doi.org/10.1080/20008198.2017.1398001

Murphy, D., Williamson, C., Baumann, J., Busuttil, W., & Fear, N. (2020). Exploring the impact of COVID-19 and restrictions to daily living as a result of social distancing within veterans with pre-existing mental health difficulties. *BMJ Mil Health*. http://dx.doi.org/ 10.1136/bmjmilitary-2020-001622

Nazarov, A., Hunt, R., Davis, B., St Cyr, K., & Richardson, J. D. (2020). The influence of depression-PTSD comorbidity on health-related quality of life in treatment-seeking veterans. *European Journal of Psychotraumatology, 1*(11). https://doi.org/10.1080/20008198.2020.1748460

NICE. (2020). Generalized anxiety disorder. *London: National Institute for Health and Care Excellence*. https://cks.nice.org.uk/topics/generalized-anxiety-disorder/

Nindl, B. C., Billing, D. C., Drain, J. R., Beckner, M. E., Greeves, J., Groeller, H., Teien, H. K., Marcora, S., Moffitt, A., & Reilly, T. (2018). Perspectives on resilience for military readiness and preparedness: report of an international military physiology roundtable. *Journal of science and medicine in sport, 21*(11), 1116-1124. http://dx.doi.org/10.1016/j.jsams.2018.05.005

Nitschke, J. P., Forbes, P. A., Ali, N., Cutler, J., Apps, M. A., Lockwood, P. L., & Lamm, C. (2021). Resilience during uncertainty? Greater social connectedness during COVID-19 lockdown is associated with reduced distress and fatigue. *British Journal of Health Psychology, 26*(2), 553-569. http://dx.doi.org/10.1111/bjhp.12485

Norman, S., Haller, M., Kim, H. M., Allard, C., Porter, K., Stein, M. B., Venners, M., Authier, C., & Rauch, S. (2018). Trauma related guilt cognitions partially mediate the relationship between PTSD symptom severity and functioning among returning combat veterans. *Journal of Psychiatric Research, 100*, 56-62. http://dx.doi.org/10.1016/j.jpsychires.2018.02.003

Olenick, M., Flowers, M., & Diaz, V. J. (2015). US veterans and their unique issues: enhancing health care professional awareness. *Advances in medical education and practice, 6*, 635. http://dx.doi.org/10.2147/AMEP.S89479

Olsen, W. (2002). Dialectical triangulation and empirical research. 6th IACR Annual Conference, University of Bradford,

Öztuna, D., Elhan, A. H., & Tüccar, E. (2006). Investigation of four different normality tests in terms of type 1 error rate and power under different distributions. *Turkish Journal of Medical Sciences*, *36*(3), 171-176.

Palmer, E., Murphy, D., & Spencer-Harper, L. (2017). Experience of post-traumatic growth in UK veterans with PTSD: a qualitative study. *BMJ Military Health, 163*(3), 171-176. http://dx.doi.org/10.1136/jramc-2015-000607

Pappas, G., Kiriaze, I. J., Giannakis, P., & Falagas, M. E. (2009). Psychosocial consequences of infectious diseases. Clinical Microbiology and Infection: The Official Publication of the European Society of Clinical Microbiology and Infectious Diseases, 15(8), 743–747. https://dx.doi.org/10.1111/j.1469-0691.2009.02947.x

Parry, G., Hodge, S. M., & Barrett, A. (2021). Veterans' experiences of successfully managing post-traumatic stress disorder. *Mental Health Review Journal*. https://dx.doi.org/10.1108/MHRJ-01-2020-0003

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, inc.

Philip, J., & Cherian, V. (2020). Factors affecting the psychological well-being of health care workers during an epidemic: a thematic review. *Indian Journal of Psychological Medicine, 42*(4), 323-333. http://dx.doi.org/10.1177/0253717620961651

Pietrzak, R. H., Tsai, J., Armour, C., Mota, N., Harpaz-Rotem, I., & Southwick, S. M. (2015). Functional significance of a novel 7-factor model of DSM-5 PTSD symptoms: Results from the National Health and Resilience in Veterans Study. *Journal of Affective Disorders, 174*, 522-526. http://dx.doi.org/10.1016/j.jad.2014.12.007

Pietrzak, R. H., Tsai, J., & Southwick, S. M. (2021). Association of Symptoms of Posttraumatic Stress Disorder With Posttraumatic Psychological Growth Among US Veterans During the COVID-19 Pandemic. *JAMA Network Open, 4*(4), e214972-e214972. http://dx.doi.org/ 10.1001/jamanetworkopen.2021.4972

Poland, B. D. (2002). Transcription quality. *Handbook of interview research: Context and method, 629*.

Porges, S. W. (2018). Polyvagal theory: A primer. *Clinical applications of the polyvagal theory: The emergence of polyvagal-informed therapies*, 50-69.

Porges, S. W. (2020). The COVID-19 Pandemic is a paradoxical challenge to our nervous system: a Polyvagal Perspective. *Clin Neuropsychiatry, 17*, 135-138.

Porges, S. W., & Dana, D. (2018). *Clinical Applications of the Polyvagal Theory: The Emergence of Polyvagal-Informed Therapies (Norton Series on Interpersonal Neurobiology)*. WW Norton & Company.

Porter, L. S., & Stone, A. A. (1996). An approach to assessing daily coping. In M. Zeidner & N. S. Endler (Eds.), Handbook of coping: Theory, research, applications (p. 133–150). John Wiley & Sons.

Quansah, F. (2017). The Use Of Cronbach Alpha Reliability Estimate In Research Among Students In Public Universities In Ghana. African Journal of Teacher Education, *6*. https://dx.doi.org/10.21083/ajote.v6i1.3970

Raley, M. J. (2017). Social connectedness and social support in a military and civilian college population: Associations with psychological, physical and stress-related health outcomes. UNF Graduate Theses and Dissertations. 739.

Ramchand, R., Harrell, M., Berglass, N., & Lauck, M. (2020). Veterans and COVID-19: Projecting the Economic, Social and Mental Health Needs of America's Veterans. *New York, NY: The Bob Woodruff Foundation*.

Redmond, S., Wilcox, S., Campbell, S., Kim, A., Finney, K., Barr, K., & Hassan, A. (2015). A brief introduction to the military workplace culture. *Work, 50*(1), 9-20. http://dx.doi.org/10.3233/WOR-141987

Rice, V. J., Overby, C., Boykin, G., Jeter, A., & Villarreal, J. (2014). How do I handle my life now? Coping and the post-traumatic stress disorder checklist-military version. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, http://dx.doi.org/10.1177/1541931214581261

Rohrer, J. M. (2018). Thinking clearly about correlations and causation: Graphical causal models for observational data. *Advances in Methods and Practices in Psychological Science, 1*(1), 27-42.

Rolland, J. S. (2020). COVID-19 Pandemic: Applying a Multisystemic Lens. *Family process, 59*(3), 922-936. https://doi.org/10.1111/famp.12584

Romaniuk, M., & Kidd, C. (2018). The psychological adjustment experience of reintegration following discharge from military service: A systemic review. *Journal of Military and Veterans Health, 26*(2), 60.

Rubin, M., & Hewstone, M. (1998). Social identity theory's self-esteem hypothesis: A review and some suggestions for clarification. *Personality and social psychology review, 2*(1), 40-62. http://dx.doi.org/10.1207/s15327957pspr0201_3

Sahar, T., Shalev, A. Y., & Porges, S. W. (2001). Vagal modulation of responses to mental challenge in posttraumatic stress disorder. *Biological Psychiatry, 49*(7), 637-643. http://dx.doi.org/10.1016/S0006-3223(00)01045-3

Sarah, K., Oceane, S., Emily, F., & Carole, F. (2021). Learning from lockdown-Assessing the positive and negative experiences, and coping strategies of researchers during the COVID-19 pandemic. *Applied Animal Behaviour Science, 236*, 105269. https://doi.org/10.1016/j.applanim.2021.105269

Sayer, R. A. (1992). *Method in social science: A realist approach*. Psychology Press.

Schimmenti, A., Billieux, J., & Starcevic, V. (2020). The four horsemen of fear: An integrated model of understanding fear experiences during the COVID-19 pandemic. *Clinical Neuropsychiatry, 17*(2), 41-45.

Schnider, K. R., Elhai, J. D., & Gray, M. J. (2007). Coping style use predicts posttraumatic stress and complicated grief symptom severity among college students reporting a traumatic loss. *Journal of Counseling Psychology, 54*(3), 344. http://dx.doi.org/10.1037/0022-0167.54.3.344

Schumacher, W. (2017). *Moral injury and suicidal ideation after military service: Mediating and moderating factors*. (Doctoral dissertation). University of Oregon: Eugene, Oregon.

Shannon-Baker, P. (2016). Making paradigms meaningful in mixed methods research. *Journal of mixed methods research, 10*(4), 319-334. http://dx.doi.org/10.1177/1558689815575861

Shields, D. M. (2016). Military masculinity, movies, and the DSM: Narratives of institutionally (en) gendered trauma. *Psychology of Men & Masculinity, 17*(1), 64. http://dx.doi.org/10.1037/a0039218

Shigemoto, Y., Low, B., Borowa, D., & Robitschek, C. (2017). Function of personal growth initiative on posttraumatic growth, posttraumatic stress, and depression over and above adaptive and maladaptive rumination. *Journal of Clinical Psychology, 73*(9), 1126-1145. http://dx.doi.org/10.1002/jclp.22423

Skeffington, P. M., Rees, C. S., & Mazzucchelli, T. (2017). Trauma exposure and post-traumatic stress disorder within fire and emergency services in Western Australia. *Australian Journal of Psychology, 69*(1), 20-28. http://dx.doi.org/10.1111/ajpy.12120

Slone, L. B., & Friedman, M. J. (2008). *After the war zone: A practical guide for returning troops and their families*. Da Capo Lifelong Books.

Smith, R. T., & True, G. (2014). Warring identities: Identity conflict and the mental distress of American veterans of the wars in Iraq and Afghanistan. *Society and mental Health, 4*(2), 147-161. http://dx.doi.org/10.1177/2156869313512212

Sousa, V. D., Driessnack, M., & Mendes, I. A. C. (2007). An overview of research designs relevant to nursing: Part 1: quantitative research designs. *Revista latino-americana de enfermagem, 15*(3), 502-507. http://dx.doi.org/10.1590/S0104-11692007000300022

Spitzer, R. L., Kroenke, K., Williams, J. B., Group, P. H. Q. P. C. S., & Group, P. H. Q. P. C. S. (1999). Validation and utility of a self-report version of PRIME-MD: the PHQ

primary care study. *Jama*, *282*(18), 1737-1744. http://dx.doi.org/10.1001/jama.282.18.1737

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

Startup, M., Makgekgenene, L., & Webster, R. (2007). The role of self-blame for trauma as assessed by the Posttraumatic Cognitions Inventory (PTCI): A self-protective cognition? *Behaviour research and therapy, 45*(2), 395-403. http://dx.doi.org/10.1016/j.brat.2006.02.003

Stebbins, R. A. (2001). *Exploratory research in the social sciences* (Vol. 48). Sage.

Steinskog, D. J., Tjøstheim, D. B., & Kvamstø, N. G. (2007). A cautionary note on the use of the Kolmogorov–Smirnov test for normality. *Monthly Weather Review, 135*(3), 1151-1157. http://dx.doi.org/10.1175/MWR3326.1

Steptoe, A., Edwards, S., Moses, J., & Mathews, A. (1989). The effects of exercise training on mood and perceived coping ability in anxious adults from the general population. *Journal of Psychosomatic Research, 33*(5), 537-547. http://dx.doi.org/10.1016/0022-3999(89)90061-5

Stevelink, S. A., Jones, M., Hull, L., Pernet, D., MacCrimmon, S., Goodwin, L., MacManus, D., Murphy, D., Jones, N., & Greenberg, N. (2018). Mental health outcomes at the end of the British involvement in the Iraq and Afghanistan conflicts: a cohort study. *The British Journal of Psychiatry, 213*(6), 690-697. http://dx.doi.org/10.1192/bjp.2018.175

Strauss, A., & Corbin, J. M. (1997). *Grounded theory in practice*. Sage.

Su, X.-y., Lau, J. T., Mak, W. W., Choi, K., Feng, T.-j., Chen, X., Liu, C.-l., Liu, J., Liu, D., & Chen, L. (2015). A preliminary validation of the Brief COPE instrument for assessing coping strategies among people living with HIV in China. *Infectious diseases of poverty, 4*(1), 1-10. http://dx.doi.org/10.1186/s40249-015-0074-9

Sullivan, G. M., & Feinn, R. (2012). Using effect size—or why the P-value is not enough. *Journal of graduate medical education, 4*(3), 279. http://dx.doi.org/ 10.4300/JGME-D-12-00156.1

Sun, Y., Fu, Z., Bo, Q., Mao, Z., Ma, X., & Wang, C. (2020, 2020/09/29). The reliability and validity of PHQ-9 in patients with major depressive disorder in psychiatric hospital. *Bmc Psychiatry, 20*(1), 474. https://doi.org/10.1186/s12888-020-02885-6

Sutherland, I. (2013). Arts-based methods in leadership development: Affording aesthetic workspaces, reflexivity and memories with momentum. *Management Learning, 44*(1), 25-43. http://dx.doi.org/10.1177/1350507612465063

Swart, R. (2019). *Thematic analysis of survey responses from undergraduate students*. SAGE Publications, Limited.

Swinscow, T., & Campbell, M. (1997). Study design and choosing a statistical test. *Statistics at Square One. London: BMJ Publishing Group*.

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. Research in science education, 48(6), 1273-1296. https://dx.doi.org/10.1007/s11165-016-9602-2Taha, S., Matheson, K., Cronin, T., & Anisman, H. (2014). Intolerance of uncertainty, appraisals, coping, and anxiety: The case of the 2009 H 1 N 1 pandemic. *British Journal of Health Psychology, 19*(3), 592-605. http://dx.doi.org/ 10.1111/bjhp.12058

Tajfel, H. E. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. Academic Press.

Talbot, L. A. (1995). *Principles and practice of nursing research*. Mosby Incorporated.

Tashakkori, A., & Teddlie, C. (2003). Issues and dilemmas in teaching research methods courses in social and behavioural sciences: US perspective. *International journal of social research methodology, 6*(1), 61-77. http://dx.doi.org/10.1080/13645570305055

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. International journal of medical education, 2, 53–55. https://dx.doi.org/10.5116/ijme.4dfb.8dfd

Tenhula, W. N., Nezu, A. M., Nezu, C. M., Stewart, M. O., Miller, S. A., Steele, J., & Karlin, B. E. (2014). Moving forward: A problem-solving training program to foster veteran resilience. *Professional Psychology: Research and Practice, 45*(6), 416. http://dx.doi.org/10.1037/a0037150

Teo, A. R., Marsh, H. E., Forsberg, C. W., Nicolaidis, C., Chen, J. I., Newsom, J., Saha, S., & Dobscha, S. K. (2018). Loneliness is closely associated with depression outcomes and suicidal ideation among military veterans in primary care. *Journal of Affective Disorders, 230,* 42-49. http://dx.doi.org/10.1016/j.jad.2018.01.003

Thode, H. C. (2002). *Testing for normality* (Vol. 164). CRC press.

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American journal of evaluation, 27*(2), 237-246. http://dx.doi.org/10.1177/1098214005283748

Thuen, E., & Bru, E. (2004). Coping styles and emotional and behavioural problems among Norwegian grade 9 students. *Scandinavian Journal of Educational Research, 48*(5), 493-510. http://dx.doi.org/10.1080/00313042000272140

Tick, E. (2012). *War and the soul: Healing our nation's veterans from post-traumatic stress disorder*. Quest Books.

Trangle, M., Gursky, J., Haight, R., Hardwig, J., Hinnenkamp, T., Kessler, D., & Myszkowski, M. (2016). *Depression in primary care: Health Care Guidelines*. Institute for Clinical systems Improvement.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Basil Blackwell.

Van der Kolk, B. (2014). *The body keeps the score: Mind, brain and body in the transformation of trauma*. Penguin UK.

Van Gennep, A. (2019). *The rites of passage*. University of Chicago Press.

Van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: a quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin, 134*(4), 504. http://dx.doi.org/10.1037/0033-2909.134.4.504

Vasileiou, K., Barnett, J., Thorpe, S., & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC medical research methodology, 18*(1), 1-18. http://dx.doi.org/10.1186/s12874-018-0594-7

Viera, A. J., & Garrett, J. M. (2005). Understanding interobserver agreement: the kappa statistic. *Fam med, 37*(5), 360-363.

Vogt, D. (2011). Mental health-related beliefs as a barrier to service use for military personnel and veterans: a review. *Psychiatric Services, 62*(2), 135-142. http://dx.doi.org/10.1176/ps.62.2.pss6202_0135

Walker, H. K. (1990). Cranial nerve XI: the spinal accessory nerve. *Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd edition*.

Weathers, F. W., Blake, D. D., Schnurr, P., Kaloupek, D., Marx, B. P., & Keane, T. M. (2013). The clinician-administered PTSD scale for DSM-5 (CAPS-5). *Interview available from the National Center for PTSD at www. ptsd. va. gov, 6*.

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD checklist for DSM-5 (PCL-5). *Scale available from the National Center for PTSD at www. ptsd. va. gov, 10*.

Widhiarso, W., & Ravand, H. (2014). Estimating reliability coefficient for multidimensional measures: A pedagogical illustration. Review of psychology, 21(2), 111-121.

Wilkins, S. S., Melrose, R. J., Hall, K. S., Blanchard, E., Castle, S. C., Kopp, T., Katzel, L. I., Holder, A., Alexander, N., & McDonald, M. K. (2020). PTSD Improvement Associated with Social Connectedness in Gerofit Veterans Exercise Program. *Journal of the American Geriatrics Society*. https://doi.org/10.1111/jgs.16973

Williamson, V., Stevelink, S. A., & Greenberg, N. (2018). Occupational moral injury and mental health: systematic review and meta-analysis. *The British Journal of Psychiatry, 212*(6), 339-346. http://dx.doi.org/10.1192/bjp.2018.55

Woodward, R., & Jenkings, K., N,. (2011). Military identities in the situated accounts of British military personnel. *Sociology, 45*(2), 252-268. http://dx.doi.org/10.1177/0038038510394016

Wray, N., Markovic, M., & Manderson, L. (2007). "Researcher saturation": the impact of data triangulation and intensive-research practices on the researcher and qualitative

research process. *Qualitative Health Research, 17*(10), 1392-1402. http://dx.doi.org/10.1177/1049732307308308

Wu, P., Fang, Y., Guan, Z., Fan, B., Kong, J., Yao, Z., Liu, X., Fuller, C. J., Susser, E., & Lu, J. (2009). The psychological impact of the SARS epidemic on hospital employees in China: exposure, risk perception, and altruistic acceptance of risk. *The Canadian Journal of Psychiatry, 54*(5), 302-311. http://dx.doi.org/10.1177/070674370905400504

Wu, X., Kaminga, A. C., Dai, W., Deng, J., Wang, Z., Pan, X., & Liu, A. (2019). The prevalence of moderate-to-high posttraumatic growth: A systematic review and meta-analysis. *Journal of Affective Disorders, 243*, 408-415. http://dx.doi.org/10.1016/j.jad.2018.09.023

Wu, Y.-J., Wu, Y.-J., Chen, C.-W., & Sun, R. (2021). The Relations of Social Support and Social Connectedness to Well-being during the COVID-19 Pandemic across 49 countries. http://dx.doi.org/ 10.31234/osf.io/7fqvs

Yip, P. S., Cheung, Y., Chau, P. H., & Law, Y. (2010). The impact of epidemic outbreak: the case of severe acute respiratory syndrome (SARS) and suicide among older adults in Hong Kong. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 31*(2), 86. http://dx.doi.org/10.1027/0227-5910/a000015

Zachariadis, M., Scott, S., & Barrett, M. (2010). Exploring critical realism as the theoretical foundation of mixed-method research: evidence from the economics of IS innovations (Working Paper Series 3/2010). *Judge Business School, Cambridge, UK*.

Zachariadis, M., Scott, S., & Barrett, M. (2013). Methodological implications of critical realism for mixed-methods research. *MIS Quarterly*, 855-879.

Zerai, A. (2000). Agents of knowledge and action: Selected Africana scholars and their contributions to the understanding of race, class and gender intersectionality. *Cultural Dynamics, 12*(2), 182-222. http://dx.doi.org/10.1177/092137400001200205

Zirker, D., Danopoulos, C. P., & Simpson, A. (2008). The military as a distinct ethnic or quasi-ethnic identity in developing countries. *Armed Forces & Society, 34*(2), 314-337. http://dx.doi.org/10.1177/0095327X07302978

APPENDICES

Appendix I: Ethical Approval Letter

DPAP Committee

29/09/2020

Supervisor: Thomas Schroder

Applicant : Daniel Brooks

Project: Project Id The impact of COVID-19 on coping abilities within UK Military Veterans

A favourable opinion is given to the above named study on the understanding that the applicants conduct their research as described in the above numbered application. Applicants need to adhere to all conditions under which the ethical approval has been granted and use only materials and documentation that have been approved.

If you need to make any any changes (for example to the date or place of data collection, or measures used), an Amendment Form should be submitted. This can be done by the Supervisor in 'Create Sub Form' in the Actions Menu on the left hand side of the page on the on-line system: Select 'Amendment Form'

yours

Professor David Daley

Co-Chair of DoPAP Ethics Subcommittee

Professor Amanda Griffiths

Co-Chair of DoPAP Ethics Subcommittee

Appendix II: Participant Information Sheet for Survey

University of Nottingham
UK | CHINA | MALAYSIA

PARTICIPANT INFORMATION

STUDENT RESEARCH PROJECT ETHICS REVIEW
Division of Psychiatry & Applied Psychology

Project Title: The impact of COVID-19 on coping abilities within UK Military Veterans

Researcher/Student: Dan Brooks, msxdb9@nottingham.ac.uk

Supervisor/Chief Investigator: Thomas Schroeder, lwzts@nottingham.ac.uk

Ethics Reference Number: DPAP - 2020 - 1641 - 3

You are invited to take part in Phase One of this research study. Before you decide, it is important for you to understand why the research is being done and what it would involve for you. Please take the time to read the following information carefully. If there is anything that is not clear or you would like any further information, you can contact the researchers via the details at the top of this information sheet.

What is the purpose of the study?
The aim of the research will be to explore the impact of the COVID-19 pandemic on military veterans. The research will focus on coping styles, mental health, and social interaction have changed since the introduction of restrictions in the UK. The study will be included in a Clinical Psychology Doctorate thesis as part of the Division of Psychiatry and Applied Psychology at the University of Nottingham.

Why have I been invited?
You may have responded to our social media post within various veteran support groups. We are looking to recruit participants over the age of 18 who have served in a branch of the British armed forces and are no longer serving in active duty.

Do I have to take part?
It is up to you to decide whether or not to take part. If you do decide to take part, you will be asked to give your consent. You are still free to withdraw at any time and without giving a reason.

What will happen to me if I take part?
The study will involve completing one online survey. This will cover topics such as anxiety, depression, social interaction, and the kinds of coping strategies you use to manage during the restrictions. The length of time which the survey will take to complete will roughly be about 30 minutes. Each type of question will be explained clearly before you are asked to answer it. You will also have the opportunity to participate in an interview later. You will have the option to opt into this at the end of the survey.

Are there any possible disadvantages or risks in taking part?

If you have had a difficult experience since the UK restrictions were imposed in March, you may find reflecting on some of the questions distressing. It is therefore important you keep in mind the

voluntary aspect of the research. You can stop completing the survey at any point. There will be a debrief page at the end of the survey that will offer advice on how to seek help or support should you become upset or distressed.

What will happen to the information I provide?
The research will be submitted in part fulfilment of the researchers Clinical Psychology Doctorate thesis. Following this, it may be submitted for publication and be presented at research conferences. During this time, you will not be identified in any way from the data. A copy of the study's findings can be provided by (Trainee) on request from July 2021.

All information collected within the study will be kept confidential. We will follow ethical and legal practice and all information about you will be handled in confidence. Only the researcher and the research supervisor will have data.

When you have completed the survey, you will be asked if you would like to take part in the next phase of the research. If you agree, we will ask you for some contact details including your name, postcode and a contact email or telephone number. Your details will remain on a secure database that only the researchers have access to. Once you have completed and submitted an anonymous questionnaire it is not possible to withdraw the data because we won't know who you are.

Under UK Data Protection laws the University is the Data Controller (legally responsible for the data security) and the Chief Investigator of this study (named above) is the Data Custodian (manages access to the data). This means we are responsible for looking after your information and using it properly. Your rights to access, change or move your information are limited as we need to manage your information in specific ways to comply with certain laws and for the research to be reliable and accurate. To safeguard your rights we will use the minimum personally – identifiable information possible.

You can find out more about how we use your information and to read our privacy notice at:

https://www.nottingham.ac.uk/utilities/privacy.aspx.

The data collected for the study will be looked at and stored by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people from regulatory organisations to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

At the end of the project, all raw data will be kept securely by the University under the terms of its data protection policy after which it will be disposed of securely. The data will not be kept elsewhere.

If you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the email addresses above. If you are also interested in finding out the final results of the study, you can contact the researcher via email.

What if there is a problem?

If you have any queries or complaints, please contact the student's supervisor/chief investigator in the first instance. If this does not resolve your query, please write to the Administrator to the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee adrian.pantry1@nottingam.ac.uk who will pass your query to the Chair of the Committee.

We believe there are no known risks associated with this research study; however, as with any online activity the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous.

Support services and Helplines:

- Combat Stress Helpline (24 hours a day): **0800 138 1619**: www.combatstress.org.uk
- Samaritans (24 hours a day): **08457 909090**: www.samaritans.org
- Contact your GP service if you experience any distress

Appendix III: Consent Form for Survey

University of Nottingham
UK | CHINA | MALAYSIA

PARTICIPANT CONSENT

STUDENT RESEARCH PROJECT ETHICS REVIEW
Division of Psychiatry & Applied Psychology

Project Title: The impact of COVID-19 on coping abilities within UK Military Veterans

Researcher/Student: Dan Brooks, msxdb9@nottingham.ac.uk

Supervisor/Chief Investigator: Thomas Schroeder, lwzts@nottingham.ac.uk

Ethics Reference Number: DPAP - 2020 - 1641 - 3

- Have you read and understood the Participant Information? YES/NO
- Do you agree to participate in a survey about the impact of coping style Within Military Veterans YES/NO
- Do you know how to contact the researcher if you have questions about this study? YES/NO
- Do you understand that you are free to withdraw from the study without giving a reason? YES/NO
- Do you understand that for anonymous surveys studies, once you have completed the study and submitted your answers, the data cannot be withdrawn? YES/NO
- Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected? YES/NO
- Do you understand that non-identifiable data from this study including quotations might be used in academic research reports or publications? YES/NO
- I confirm that I am 18 years old or over YES/NO

Signature of Participant ..... Date .....

Name (in capitals) .....

By clicking the button below I indicate that I understand what the study involves and I agree to take part. If I do not want to participate I can close this window/press the exit button.

Appendix IV: Participant Information Sheet for Interviews

University of Nottingham
UK | CHINA | MALAYSIA

PARTICIPANT INFORMATION

STUDENT RESEARCH PROJECT ETHICS REVIEW
Division of Psychiatry & Applied Psychology

Project Title: The impact of COVID-19 on coping abilities within UK Military Veterans

Researcher/Student: Dan Brooks, msxdb9@nottingham.ac.uk

Supervisor/Chief Investigator: Thomas Schroeder, lwzts@nottingham.ac.uk

Ethics Reference Number: DPAP - 2020 - 1641 - 3

You are invited to take part in Phase two of this research study. Before you decide, it is important for you to understand why the research is being done and what it would involve for you. Please take the time to read the following information carefully. If there is anything that is not clear or you would like any further information, you can contact the researchers via the details at the top of this information sheet.

What is the purpose of the study?
The aim of the research will be to explore the impact of the COVID-19 pandemic on military veterans. The research will focus on how coping styles, mental health, and social interaction have changed since the introduction of restrictions in the UK. The study will be included in a Clinical Psychology Doctorate thesis as part of the Division of Psychiatry and Applied Psychology at the University of Nottingham.

Why have I been invited?

You have completed the survey within Phase one of the study and have expressed interest in being contacted for further participation. We are looking to interview individuals to gain insight into their experiences of coping during the COVID-19 pandemic.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part, you will be asked to give your consent.

What will happen to me if I take part?

This part of the study will involve being interviewed for up to 60 minutes with the researcher via telephone/remote video interviews. Questions will be based around your experiences during COVID-19 and the UK restrictions such as coping and social interactions. You will be able to stop the interview at any time or chose to not answer a question.

What are the possible disadvantages and risks of taking part?

If you have had a difficult experience since leaving the army, you may find reflecting on this during the interview distressing. It is therefore important you keep in mind the voluntary aspect of

the research. You can stop the interview at any time. There will be a debrief sheet at the end of the interview and it will provide advice on how to seek help or support should you become upset or distressed.

What will happen to the information I provide?
The research will be submitted in part fulfilment of the researchers Clinical Psychology Doctorate thesis. Following this, it may be submitted for publication and be presented at research conferences. During this time, you will not be identified in any way from the data. A copy of the study's findings can be provided by (Trainee) on request from February 2021.

All information collected within the study will be kept confidential. We will follow ethical and legal practice and all information about you will be handled in confidence. Only the researcher and the research supervisor will have access to the data. Your interview will be audio recorded and stored electronically on a secure computer. Your signed consent form will be stored securely at the University of Nottingham. You name will not be used during any write-up of this study and you will be allocated a pseudonym to protect your anonymity.

Your participation is voluntary, and you are free to withdraw at any time prior or during the interview. Once you have completed the interview, you will have up to 48 hours to withdraw your data from the study.

Under UK Data Protection laws the University is the Data Controller (legally responsible for the data security) and the Chief Investigator of this study (named above) is the Data Custodian (manages access to the data). This means we are responsible for looking after your information and using it properly. Your rights to access, change or move your information are limited as we need to manage your information in specific ways to comply with certain laws and for the research to be reliable and accurate. To safeguard your rights we will use the minimum personally – identifiable information possible.

You can find out more about how we use your information and to read our privacy notice at:

https://www.nottingham.ac.uk/utilities/privacy.aspx.

The data collected for the study will be looked at and stored by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people from regulatory organisations to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

At the end of the project, all raw data will be kept securely by the University under the terms of its data protection policy after which it will be disposed of securely. The data will not be kept elsewhere.

If you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the email addresses above. If you are also interested in finding out the final results of the study, you can contact the researcher via email.

What if there is a problem?

If you have any queries or complaints, please contact the student's supervisor/chief investigator in the first instance. If this does not resolve your query, please write to the Administrator to the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee adrian.pantry1@nottingam.ac.uk who will pass your query to the Chair of the Committee.

We believe there are no known risks associated with this research study; however, as with any online activity the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous.

Support services and Helplines:

- Combat Stress Helpline (24 hours a day): **0800 138 1619**: www.combatstress.org.uk
- Samaritans (24 hours a day): **08457 909090**: www.samaritans.org
- Contact your GP service if you experience any distress

Appendix V: Consent Form for Interviews

PARTICIPANT CONSENT

STUDENT RESEARCH PROJECT ETHICS REVIEW
Division of Psychiatry & Applied Psychology

Project Title: The impact of COVID-19 on coping abilities within UK Military Veterans

Researcher/Student: Dan Brooks, msxdb9@nottingham.ac.uk

Supervisor/Chief Investigator: Thomas Schroeder, lwzts@nottingham.ac.uk

Ethics Reference Number: DPAP - 2020 - 1641 - 3

- Have you read and understood the Participant Information? YES/NO
- Do you agree to take part in an interview that will be recorded about your experience during the COVID-19 pandemic? YES/NO
- Do you know how to contact the researcher if you have questions about this study? YES/NO
- Do you understand that you are free to withdraw from the study without giving a reason? YES/NO
- Do you understand that once you have been interviewed it may not be technically possible to withdraw your data unless requested within 48 hours? YES/NO
- Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected? YES/NO
- Do you understand that non-identifiable data from this study including quotations might be used in academic research reports or publications? YES/NO
- I confirm that I am 18 years old or over YES/NO

Signature of Participant …… Date ……

Name (in capitals) ……

Appendix VI: Debrief Page for Participants

Thank you for completing this survey. This study is researching military veterans' experiences of COVID-19 and what impact this has had. We are particularly interested in coping styles and social interactions and how these have changed since the introduction of restrictions in the UK. To further explore this, we are looking to interview a number of respondents about their experiences since the onset of restrictions. This will involve a 60-minute interview where the researcher will contact you either via telephone or online (e.g. Zoom/Skype). Your participation is completely voluntary.

If you would be interested in being selected for an interview, then please complete the contact information below. If you are chosen, the researcher will be in contact to provide information around the interview as well as schedule a time to meet. If you wish to be involved in interviews, your contact details will remain secure and confidential throughout the process.

Contact details:

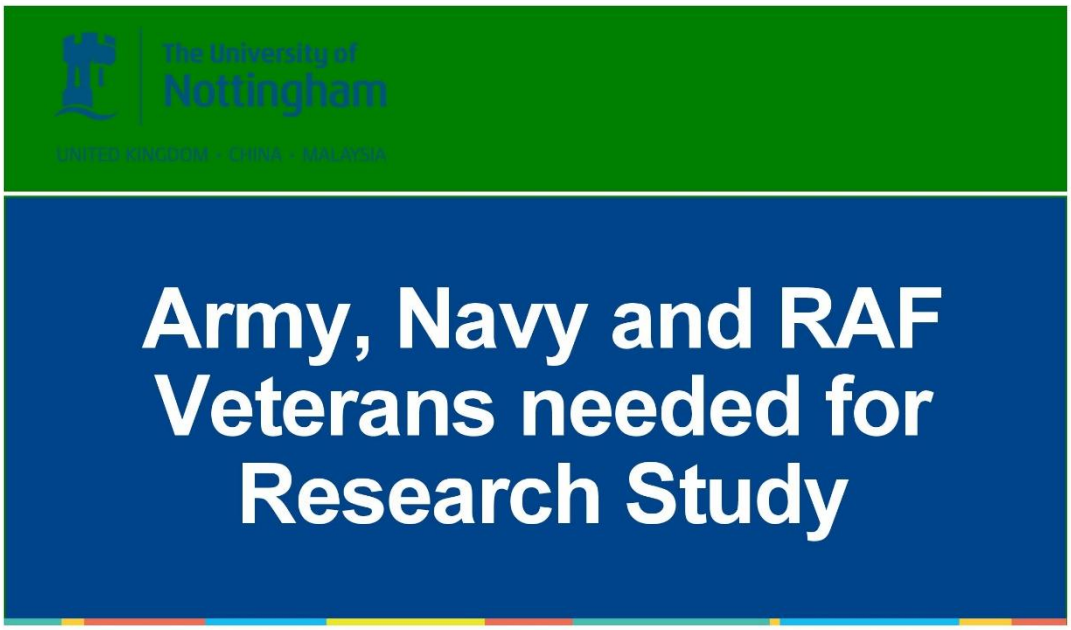
Name:_____

Postcode:_____

Contact Number:_____

Email Address:_____

Appendix VII: Online Advertisement



Have you previously served within the Army, Navy, or RAF?

Then you are eligible for a research study looking into the impact of COVID-19!

You Will Qualify If:

- You have previously served within a branch of the UK military
- You have been fully discharged from service

Participation Involves:

- Completing a 25 minute online survey
- There will be an option to possibly take part in an interview at a later date

Please follow this link:

https://nottingham.onlinesurveys.ac.uk/impact-of-covid-19-in-military-veterans

If you know anyone who would be interested in the study, please share this post!

Appendix VIII: Online Survey

Demographic Information

Please select/input the answer that best applies to you and complete all questions.

Q1) Gender

- ☐ Male
- ☐ Female
- ☐ Prefer not to say
- ☐ Other

Q2) Age

Q3) Marital status

- ☐ Single
- ☐ Married
- ☐ Civil Partnership
- ☐ In a relationship
- ☐ Engaged
- ☐ Separated
- ☐ Divorced
- ☐ Widowed

Q4) Which branch of the UK Military did you serve in?

- ☐ British Army
- ☐ British Navy
- ☐ Royal Air Force
- ☐ Royal Marines

Q5) How many years did you serve?

Q6) Under what circumstances were you discharged?

- ☐ Normal service leaver
- ☐ Early service leaver

Q6) Are you employed?

- ☐ No
- ☐ Part-time
- ☐ Full-time
- ☐ Voluntary
- ☐ Prefer not to say

Q7) Approximately how many days has it been since you were discharged?

COVID-19

What impact has the COVID-19 lockdown had on your life?

How have you coped in relation to this?

Have you previously tested positive for COVID-19?

- Yes, confirmed by test
- Suspected, but not confirmed by test
- Unsure
- No, I don't think so

Where did you hear about this study?

- Facebook
- Twitter
- Instagram
- Word of mouth
- Friends/family/colleagues
- Charity/organisation

COVID-19

What impact has the COVID-19 lockdown had on your life?

How have you coped in relation to this?

Have you previously tested positive for COVID-19?

- Yes, confirmed by test
- Suspected, but not confirmed by test
- Unsure
- No, I don't think so

Where did you hear about this study?

- Facebook
- Twitter
- Instagram
- Word of mouth
- Friends/family/colleagues
- Charity/organisation

Appendix IX: Interview Schedule

1. ***Questions aimed at building rapport and establishing the topic of conversation***
   What has been your experience of the COVID-19 situation and the lockdown measures?

2. ***Questions aimed at eliciting how participants have coped in response to COVID-19***
   During the current COVID-19 situation, have you found anything particularly difficult/stressful?
   How have you coped with that?
   Has this way of coping worked well for you?
   Have there been any positive effects of the COVID situation in general? *Anything that suited you?*
   Have you had to adapt at all?
   What did this look like?

3. ***Questions aimed at eliciting the impact of COVID-19 on personal and mental wellbeing***
   Has your mental health been impacted by the pandemic and restrictions?
   What was your personal experience?
   If so, what helped and what didn't help?
   Has there been any impact on your personal wellbeing?
   What worked for you/what made things worse?

4. ***Questions aimed at eliciting the role of individual military experience***
   Since the UK restrictions, is there anything about the restrictions or the COVID situation which has reminded you of your experiences serving within the military?
   What was the impact of this, if any?

5. ***Questions aimed at eliciting the impact of COVID-19 on social relationships***
   What impact has the COVID-19 pandemic had on your social relationships?
   If you adhered to social distancing measures, how have you adhered to it?
   And what impact have the measures had on your relationships?
   What kind of support have you been accessing during lockdown if any?
   Has it been effective or has it been impacted in any way by the measures?

6. ***Questions aimed at eliciting the impact of COVID-19 on connecting with others***
   During the pandemic, how have you remained connected with people in the community?
   Are things different in your connectedness? If so how?
   Have you found any challenges?
   Are there people you would have wanted to see more of? Less of?

7. ***Questions aimed at comparing experiences with restrictions and with individual military experience***
   Has your experience of serving in the forces affected the way you experience restrictions compared to other people, either positively or negatively?
   Do you think that your history in the forces has made things easier/more difficult in some ways?

8. ***Questions aimed at eliciting differences between the UK lockdowns***
   Thinking about the way the pandemic has unfolded so far (first lockdown, second lockdown), has there been any variation in your experience since it started?
   Have things changed at all? Have things improved or become worse?

9. ***Questions aimed at exploring perceptions of the future***
   How do you see your future in relation to the pandemic?
   What does it look like?
   What do you think your post-pandemic life may look like thinking about it now?

10. ***Questions aimed at eliciting overall experiences of the pandemic***
    Overall, how would you describe your experience from when the pandemic started up until this moment?
    Has your experience changed since?

11. ***Questions to give opportunities for participants to say anything else they feel is important and end the interview***
    Is there anything else you'd like to tell me about?

Appendix X: Coding Extracts

Interview – Grant

Interviewer:	So there's been some positive experiences to this situation?	
Grant:	Yeah, very. I mean, I just thought…with a thought we might be… problems going shopping and that I just thought a lot of diet meal replacement powders and protein powders. Just had them delivered and just use them. I think I've lost about 10 kilo and then stop smoking so… sneezes>. Excuse me a minute… <sneezes>. Taking everything into account, this would have been much more positives than negatives really.	*Switched to delivery of protein powders* *Lost weight and stopped smoking* *Positive experience*
Interviewer:	Do you feel like that's taken a lot of adapting, or its been quite easy for you?	
Grant:	Very easy. I've spent 6 six weeks in a trench in Northern Ireland. Piece of cake	*Easy experience compared to serving*
Interviewer:	Yeah in comparison	
Grant:	Yeah	

Interview – Patrick

Interviewer:	Do you feel like the restrictions have made you less safe?	
Patrick:	Yeah, I think they've made me a lot less safe. Yeah, I'm not getting out either. The most I get out is to go to the bloomin shops.	*Feel less safe* *Leaving the house less*
Interviewer:	How is that when you go out?	
Patrick:	Because I did have the Veterans Club, you see and that was on the second Sunday of the month. So I got to go there and got to speak to some veterans and stuff like that, but I don't even have that no more. More major real crappy things for me.	*Used to access veterans club* *Can't speak to other veterans*
Interviewer:	So this veterans club. Was that a regular thing where you would meet and catch up?	
Patrick:	Yeah. You went for breakfast…you have breakfast in the pub and a natter. Yeah, that's pretty much it really, but it was…. It was something that got me out. I got communication and also stuff, you know which I don't get now, you see I live in a flat on my own and I don't get much communication or anything.	*Would previously socialise with other veterans* *Lack of communication with others*

Appendix XI: Participant Characteristics - Residency

Participant Characteristics

		Survey Respondents (n=130)
Residency	England	79 (85.9%)
	Dorset	1 (1.3%)
	Gloucestershire	1 (1.3%)
	Cambridgeshire	1 (1.3%)
	Buckinghamshire	1 (1.3%)
	Suffolk	1 (1.3%)
	Rutland	1 (1.3%)
	Norfolk	1 (1.3%)
	Essex	1 (1.3%)
	Sussex	1 (1.3%)
	Surrey	1 (1.3%)
	East Yorkshire	1 (1.3%)
	Worcestershire	2 (2.5%)
	Warwickshire	2 (2.5%)
	Somerset	2 (2.5%)
	Cheshire	2 (2.5%)
	Kent	2 (2.5%)
	Bedfordshire	2 (2.5%)
	Oxfordshire	2 (2.5%)
	Devon	2 (2.5%)
	Berkshire	2 (2.5%)
	Middlesex	2 (2.5%)
	Staffordshire	2 (2.5%)
	Derbyshire	3 (3.8%)
	Lancashire	3 (3.8%)
	Leicestershire	3 (3.8%)
	Northumberland	3 (3.8%)
	Northamptonshire	3 (3.8%)
	North Yorkshire	4 (5.1%)
	Lincolnshire	5 (6.3%)
	West Yorkshire	11 (13.9%)
	Nottinghamshire	11 (13.9%)
	Scotland	9 (9.8%)
	Banffshire	1 (11.1%)
	Aberdeenshire	1 (11.1%)
	Dumfriesshire	1 (11.1%)
	Stirlingshire	1 (11.1%)
	Lanarkshire	1 (11.1%)
	Dunbartonshire	1 (11.1%)
	Morayshire	1 (11.1%)
	Ayrshire	1 (11.1%)
	Fife	1 (11.1%)
	Wales	4 (4.3%)
	Glamorgan	3 (75%)
	Carmarthenshire	1 (25%)

Appendix XII: Extract from Reflective Journal

Interview with Dave:

I really thought that doing interviews was going to be easy but that was so challenging. It makes it even harder because I'm sat in front of a screen looking at a set of questions at the same time I'm trying to watch and listen to what Dave is saying. He kept diverting from the question I had asked and then talking about something completely irrelevant. It was so exhausting trying to keep him on track. I don't usually have this problem during therapy sessions. Normally I have boundaries and I'm clear with the person. But this isn't the same, is it? I can't just turn around and say "this is relevant can we go back to my question please?". Aren't all responses in qualitative research relevant? I mean, we are trying to unpack the human experience. That was just so stressful, and I feel quite de-skilled. I remember being warned about this in supervision, but I thought I'd prepared. Apparently not. Maybe it would be good to think about what I want to do next time. Maybe repeat the question if I'm not satisfied with the response? He did start talking about his previous military career and I didn't have a question about that. Maybe starting the interview by asking about their history but in a few brief sentences. That may help with rapport and staying on track. I should also make a note and take this to my next supervision. I don't want to miss out on crucial information because I'm incapable of following an interview schedule. I suppose it's a learning process. That's what I keep hearing about a research thesis. I'll have to see how the next interview goes.

POSTER

A Mixed Methods Study into the Impact of COVID-19 on UK Veterans

University of Nottingham
UK | CHINA | MALAYSIA

Dan Brooks, Thomas Schroder & Rachel Sabin-Farrell
Trent Doctorate in Clinical Psychology

UNIVERSITY OF LINCOLN

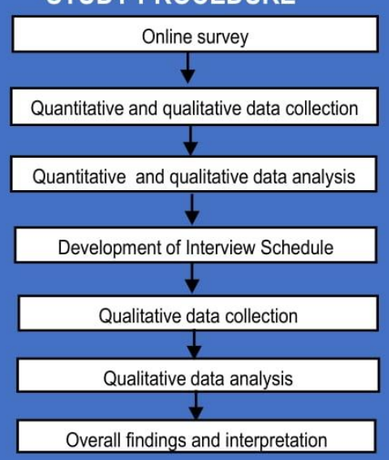
BACKGROUND

- The 2019 coronavirus pandemic has posed challenge to society to cope with an unprecedented threat. [1]
- Veterans with pre-existing mental health conditions, such as PTSD, may be susceptible to further re-traumatisation due to COVID-19 restrictions[2] and increased anxiety and depression[3]
- Bonding and a sense of connectedness with others is seen as a basic psychological need for maintaining wellbeing[4]
- Decreased social connectedness can play a significant role in creating barriers to coping and worsening psychological problems[5]
- The progression of the current UK restrictions challenge veterans' ability to function, and their abilities to cope, stay connected, and adapt

AIMS

(1)To investigate the relationship s between coping, depression, anxiety, traumatic stress, coronavirus anxiety, and social connectedness following COVID restrictions using a cross-sectional survey
(2)To use the results from the survey to inform qualitative data collection and recruitment to interviews
(3) To gain an experiential understanding of the impact that COVID restrictions may have had from the veteran perspective.

STUDY PROCEDURE



METHOD

A two-phase mixed methods sequential explanatory design was used

Phase 1 (Online survey)

- An online survey was used to collect socio-demographic and military-demographic questions, as well as measures relating to coping, social connectedness, mental health, PTSD and the impact of COVID 19.
- Spearman's rank correlations used to analyse quantitative data
- Thematic analysis used to analyse qualitative responses and develop interview schedule

Phase 2 (Interviews)

- Semi-structured interview used to explore 11 veterans' experiences
- Reflective thematic analysis used to analyse responses

RESULTS

Phase 1

- . There were strong correlations between anxiety, depression, PTSD and social connectedness scores (r_s = -.64-.87).
- There was a negative association between PTSD and social connectedness (r_s=-.71, p=<.001), and dysfunctional coping strategies (r_s =-.60, p=<.001)
- Three themes found from open-responses: *Living through the pandemic, Connecting with others, Changes to psychological state.*

Phase 2

- Five themes found (below, demonstrating a narrative whereby veterans appear to move through stages as the pandemic progresses

DISCUSSION

- Lockdown restrictions impact upon social connectedness, adapting and mental health
- Military identity is re-established during the pandemic as is a mechanism that can mobilise individuals to make changes in their life

Implications

- Reduce barriers to engagement within mental health services
- Highlight the role of military identity in the functioning of veterans

Limitations

- Predominantly male sample

Future research

- How veterans have adapted following the complete lifting of UK restrictions

[1]Fiorillo, A., & Gorwood, P. (2020). The consequences of the COVID-19 pandemic on mental health and implications for clinical practice. European Psychiatry, 63(1).
[2]Bridgland, V. M., Moeck, E. K., Green, D. M., Swain, T. L., Nayda, D. M., Matson, L. A., Hutchison, N. P., & Takarangi, M. K. (2021). Why the COVID-19 pandemic is a traumatic stressor. *Plos One, 16*(1), e0240146.
[3]Held, P., Klassen, B. J., Coleman, J. A., Thompson, K., Rydberg, T. S., & Van Horn, R. (2020). Delivering Intensive PTSD Treatment Virtually: The Development of a 2-Week Intensive Cognitive Processing Therapy–Based Program in Response to COVID-19. Cognitive and Behavioral Practice.
[4]Fisher, L. B., Overholser, J. C., Ridley, J., Braden, A., & Rosoff, C. (2015). From the outside looking in: Sense of belonging, depression, and suicide risk. Psychiatry, 78(1), 29-41.
[5]Austin, G., Calvert, T., Fasi, N., Fuimaono, R., Galt, T., Jackson, S., Lepaio, L., Liu, B., Ritchie, D., & Theis, N. (2020). Soldiering on only goes so far: How a qualitative study on Veteran loneliness in New Zealand influenced that support during COVID-19 lockdown. Journal of Military, Veteran and Family Health, 6(S2), 60-69.

SMALL SCALE RESEARCH PROJECT

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How do staff perceive the impact of reflective practice and case discussion groups within a mental health rehabilitation setting?

Abstract

Objectives: Staff within mental health settings can often experience challenges within their role, including burnout due to regular contact with service users with complex needs. Reflective practice groups have been used with staff to process complex feelings within their clinical role, improve resilience and develop interpersonal skills. Alternatively, case discussion groups can provide teams with the opportunity to share clinical experiences, develop alternative skills, and be guided to formulate service users' difficulties from a psychological perspective. This service evaluation explored how staff perceive the implementation of reflective practice and case discussion groups within an inpatient mental health setting.

Method: Ten staff members from four healthcare professions were interviewed using an unstructured interview format. Interviews were transcribed using thematic analysis.

Results: Four themes were identified: Impact on clinical skills, Team cohesion, Structuring and guiding the session and Differing function of groups across professions

Conclusions: The function of each group differed, with the structure of each influencing the impact on the staff team and their engagement. The reflective practice group offered a space to express feelings, exchange ideas, and increase team cohesion. Alternatively, the case discussion group offered practical skills for staff to develop, provide new ways of working, and actively challenged ways in which they perceive and work with service users.

Key Words: Reflective Practice, Team Formulation, Staff Wellbeing, Service Evaluation

Introduction

Mental health rehabilitation services within the UK provide specialist assessment, treatment and interventions to support individuals with complex mental health needs that cannot be met by general adult mental health services. With at least one in-patient mental health rehabilitation unit commissioned within each of the National Health Services' (NHS) 60 mental health trusts in England (Killaspy et al. 2013), there is a healthcare drive to provide quality care and intervention to not only those accessing services but also staff who work within them. Given the intense and often complex work required within these settings, professionals working in mental health wards are shown to have significantly higher levels of emotional exhaustion than their counterparts within inpatient settings (Johnson et al., 2018).

Reflective Practice

Reflective practice groups (RPG) involve participants gaining new insights of self and/or practice through the process of learning with others (Boud, Keogh & Walker, 1985). Unlike clinical supervision where staff can reflect on their personal and professional practice on a one-to-one basis (Care Quality Commission, 2013), RPGs are facilitated by professionals such as psychologists and nurses and aim to develop a culture of psychological reflexivity within mental health practitioner roles (Mann et al., 2009). Offering opportunities for staff to engage in group discussions has been shown to promote treatment planning for clients and service users (Mastoras & Andrews, 2011). It has been suggested that working with colleagues within these groups can experientially explore new and effective means of delivering therapeutic care (Hall & MacLean, 2018). Additionally, RPGs may mitigate the likelihood of isolation within clinical roles (particularly with support staff), whilst also providing support and guidance for best practice (Cottrell, 2017). Providing a safe space for staff to work through complex feelings within their clinical role is viewed as essential for improving resilience and developing insight into service users care (Dawber, 2013). A review by Dube and Ducharme (2015) not only highlighted how staff teams can benefit from enhanced self-awareness and emotional support within RPGs, but also that nursing staff appreciate the unique experiential approach that reflective practice groups can offer to their role alongside professional development. However, how these groups are structured and how staff perceive and respond to these opportunities to reflect is limited.

Case Discussions

Case discussion groups involve the facilitating of teams or groups of professionals to construct a shared understanding of a service users difficulties and recovery progress (Johnstone, 2013). The case discussions within teams are seen within a range of adult mental health settings across the UK, and this is integrated within the day-to-day work of multidisciplinary teams (Christofides, Johnstone, & Musa, 2012). These groups usually involve staff discussions around an individual presenting with complex needs and aim to promote reflectiveness and sharing of clinical experience, as well as allow teams to generate and implement action points (Rowe & Nevin, 2013). This opportunity to consult and exchange with colleagues is seen as distinct from other formal supervisory structures, due to the involvement and facilitation by a qualified psychologist, and the skill mix they bring to the role (Sullivan & Glanz, 2000). The use of case discussion groups within mental health teams has been suggested to produce several benefits including increased staff morale, challenging unfounded beliefs about service users, and generating effective ways of working with individuals (DCP, 2011); though this research is limited (Summers, 2006., Whitton, Small, Lyon, Barker, & Akiboh, 2016). Case discussion groups are regularly used within the psychology profession, but their aims and impact are not clear within the wider nursing and mental health context (Whomsley, 2010).

Whilst both groups are facilitated in different ways with differing functions, both involve the presence of psychology as a driving force and aim to address common difficulties experienced within the mental health profession, including feeling de-skilled, invalidated and overly-stressed within their role (Brown et al., 2017). Therefore, the facilitator of these groups plays a key role in allowing participants to safely disclose, access support and feel safe within a group environment (Binks, Jones, & Knight, 2013). Evidence continues to grow for the advocacy of RPGs within mental health settings as they can offer dedicated time and space to reflect on clinical roles (Thomas & Isobel, 2019). There have also been some positive changes evidenced within research, including increased problem-solving skills and the development of alternative perspectives (Fenton & Kidd, 2020). However, with regards to case discussion groups, evidence is unclear around perceived benefits to staff and what implications there are for best practice (Geach, Moghaddam, & De Boos, 2018).

Local drivers and rationale

Adult mental health services within Nottinghamshire Healthcare NHS Trust recognises and values the need for providing space and time for its clinical staff to not only increase their clinical skills but also develop a more psychological-based practice for working with service users. Staff well-being and burnout are seen as important aspects to address within the staff team through RPGs; particularly by senior management within rehabilitation services. Equally, providing sufficient opportunities for staff to discuss clinical work from a psychologically informed perspective has started to show promise, with an increase in the use of formulation and risk assessment following case discussion groups (Rousseau et al., 2020). Within the local context, the differences and potential overlap between these two types of groups can be unclear and there is a need to seek clarity around their function and execution. No previous evaluation has examined these groups within this context and therefore utilising an explorative approach may be beneficial for unpacking their roles.

Aims

This evaluation aimed to explore the experiences of staff taking part in RPGs and case discussion groups to identify the perceived impact these groups have on clinical practice.

Background

This evaluation took place within an eighteen-bed locked rehabilitation unit for men and women, located within Nottinghamshire, staffed by both qualified and support staff on a 24-hour basis. Staff had access to RPGs and case discussion groups both with separate aims (Table 23.).

Table 23
Aims of groups

Group	Occurrence	Aim
Reflective Practice Group (RPG)	Duration: 1 Hour Frequency: Once every two weeks Facilitator: External Psychologist	To provide a space to discuss difficult thoughts and feelings that arise from working with service users
Case Discussion Group	Duration: 1 Hour Frequency: Once a week Facilitator: Ward Psychologist	To formulate a specific service user as a team, discuss interventions, and generate action points for treatment pathway

Method

Study Design

A qualitative design was used to collect data from interviews with staff. Data was gathered over two months using unstructured interviews to gain an in-depth understanding of the groups on the ward and avoid directing staff views. This method is useful for understanding a particular phenomenon with little prior knowledge around the topic (Zhang & Wildemuth, 2009).

Ethical Approval

Ethical approval was granted by Nottinghamshire Healthcare NHS, with consent gained from participants. All identifiable information was anonymised, pseudonyms were used to protect participants' and service users' identities, and clinical roles were categorised rather than directly stipulated (i.e. allied health professionals).

Participants

A purposive sampling strategy was used to recruit members of staff across a multitude of professions who worked on the unit. Ten participants took part in the evaluation. Participants were required to have worked on the unit for a minimum of three months so that they have sufficient opportunities to attend both groups (a minimum of three sessions of each of the groups was required). This was to ensure that they could offer broad accounts of their experiences as well as draw upon specific examples where necessary. Participants were recruited via internal email and through their line manager.

Data Collection

Interviews commenced with an open question to establish discussions around the groups: '*What is your understanding of the RPG and case discussion groups ran on your ward*?'. This allowed for individual perspectives to be explored which could be mutually shaped by the interviewer and the interviewee, without imposing unnecessary structure. Interviews lasted up to 30 minutes and were audio-recorded and transcribed.

Interviews were initially carried out face-to-face. However, due to later COVID-19 restrictions[42], the remaining interviews were carried out via telephone.

With regards to sample sufficiency, ten participants were deemed sufficient for data analysis. Previous evaluations around RPGs have shown clear themes can be generated from samples between six and ten participants (Heneghan, Wright, & Watson, 2014; Fenton & Kidd, 2020). In addition, the participant sample was a sufficient representation of the staff, accounting for 25% of those on the ward who had attended both groups.

Data Analysis

Thematic analysis was used to analyse the transcripts in line with recommendations provided by Braun and Clarke (2006; Table 24). A critical realist stance was adopted and this informed the use of unstructured interviews and subsequent analysis (Zhang & Wildemuth, 2009). An inductive approach was chosen to allow for flexibility in interpreting and sorting data into useful themes, with semantic codes identified. In addition to this, the aim of the evaluation (to explore staff perceptions) guided the method of data collection as well as how best to capture the participants' world; through their perspectives and using their language.

Table 24

Stages of Thematic Analysis (Braun & Clarke, 2006)

	Phase	Procedure
1	Familiarising with the data	Transcribing data, reading and re-reading, taking notes and initial ideas
2	Generating initial codes	Coding interesting features within the data in a systematic way, collating data relevant to each code
3	Searching for themes	Collate codes into potential themes, gathering the data relevant to each potential theme
4	Reviewing themes	Checking the themes relate to the extracts and the whole data set
5	Defining and naming themes	Ongoing analysis to refine the specifics of each theme and the narrative; generating clear names for each theme
6	Producing the report	Select relevant extract examples, analysis of extracts, relate analysis to the research question and literature, and producing a report

[42] The COVID-19 pandemic in the United Kingdom is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). As the UK was required to enter a phase of lockdown, NHS services restricted access by external staff and therefore access to the ward was limited.

Results

Demographic Information

Demographic information was collected to explore sample characteristics and contextualise the qualitative findings of the evaluation (Table 25.)

Table 25
Sample characteristics from interviews

Staff Characteristics	*Overall (N=10)*
Gender	
Male	5 (50%)
Female	5 (50%)
Role	
Healthcare Support Staff	6 (60%)
Qualified Mental Health Nurses	2 (20%)
Management	1 (10%)
Allied Health Professional	1 (10%)
Time on the Unit (Years)	
Mean	4.5
Range	1.5 – 6
Length of Interview (Minutes)	
Mean	27
Range	18-31
No. of RPGs Attended	
Mean	4
Range	3 – 6
No. Case Discussions Attended	
Mean	5
Range	3 – 8

From analysis, four themes were identified (Table 26.)

Table 26
Themes and Sub-themes

	Theme	**Sub-theme**
1	*Impact on clinical skills*	Trying new things in the relationship
		Confidence in the role
		New approaches to recovery
2	*Team cohesion*	Shared knowledge
		Having a valued voice
		Peer validation
3	*Structuring and guiding the session*	The balance between Structure vs. non-structure
		Facilitator as a guide
4	*Differing function of groups across professions*	The usefulness of Emotional expression
		Practical applications

Impact on clinical skills

Almost all staff reported a clear impact of the groups on their clinical skills both on an individual level as well as within the team.

Trying new things in the relationship

There was a clear emphasis on the impact on the relationships with service users and how both groups contributed towards these relationships progressing. Positive relationships were highlighted as key to promoting recovery and having a space to discuss new approaches was beneficial:

> "Thinking about if somebody is feeling like they're not liked, how do we go about reinforcing that we do like you and that we do care about you. So is there praise that we can try and offer, simple things or gestures of kindness…one person might perceive 'if everybody hates me then why should I make an effort, and if we make an effort, we may be able to chip away at that until they start to think that they're worth it." (Louise)

Both groups offered different input for developing relationships. The RPG allowed staff to air difficulties establishing relationships with service users as well as feeling validated by peers. In contrast, the case discussion group provided new approaches for engaging service users; through sharing experiences of past success and staff observations:

> "…you then think about how I can try it myself. Trying it, you can then get feedback from the group and actually see what they think from talking to them." (Graham)

Confidence in the role

Confidence was an important factor for most staff when working with service users, and could have a long-standing impact upon clinical skills and engagement. The groups appeared to contribute towards the reduction of anxiety for staff, allowing them to feel understood and more proactive within their role:

> "Yeah. It's feeling a bit up-skilled and also a bit more confident. It's all a bit of both. Like I say, you definitely gain some confidence because you know

that someone else is thinking the same as you and it really does make you feel like, I said, upskilled" (Graham)

There appeared to be a shift towards using historical information to inform future practice. The RPG was used for sharing experiences where staff have felt less confident working with service users. These conversations were facilitated by the psychologist in a way that allowed them to bring similar and different experiences together.

Staff were observed to be more confident within their role as well as ways in which to use the two groups to better their clinical practice:

> "They're much more confident and open to talking and thinking about their perspectives, their experiences, not afraid to speak up and say "actually, I've considered this about that person", and that gets used within the case discussion group or it gets discussed within the RPG." (Louise)

As staff became familiar with the groups, they became more confident in their skills. Having spaces to openly reflect and divulge feelings within a safe environment was cathartic and necessary for their role. Similarly, these experiences could be shared in the case discussion group to generate more practical approaches to working. Staff perhaps have the opportunity to feel validated and instilled with confidence, as well as validate their team members through sharing their perspectives.

New approaches to recovery

Both groups displayed a shift in the approaches used by staff in the ways they worked with service users. This was a process that happened within the groups, rather than directly with the service user:

> "…what do we initially think this person's issues are. Then we all sit down and we all give a bit of a talk, and then we reflect on it, and we then say well how are we gonna work with this person? What are we gonna do differently? So it's getting the collated information about them, …What do you think works? What doesn't work? Then we come out of the room…well I come out of the room with a new strategy or way to work with this patient." (Nick)

These new approaches promoted new skills within the staff group. Whilst both groups promoted group reflective skills, each served a different function including new ways of thinking and working on the ward. Participants expressed how the RPG promoted a space for thinking about individual and group feelings, frustrations, positive experiences and other interpersonal issues, intending to increase staff reflective capabilities. In contrast, the case discussion group would place more emphasis on skills and the development of new approaches to working:

> "I mean, generally most of our staff are pretty good anyway but I think it's helped them in terms of being more boundaried with some of them I would say. And being more caring and compassionate when certain things are put in place..."(Diane)

Participants also expressed how the groups have different effects with regard to new approaches to recovery. These were seen on the practice level (i.e. implementing plans and boundaries), as well as the emotional level (i.e. increased empathy and compassion).

Team cohesion

The groups appeared to bring the staff team together through bridging individual and groups experiences.

Shared knowledge

Staff identified that whilst individual experience and skills were important to their role, having the opportunity to share these were crucial for working as a team; particularly within the case discussion group:

> "….we quite often come to work, and we think that we'll try it this way or we'll try it that way. But within a group, it's more of…more of a group thing. Without this case discussion, it would be more single working and I'd have to tap into my experience of the past rather than tapping into everybody else experience..." (Nick)

Being able to access the experiences of others was important for carrying out clinical roles effectively. Staff appeared very willing to use their knowledge and experience to carry out their role but for some, there seemed to be difficulties doing this.

Having a space to share these experiences helped to overcome this barrier; bringing together the vast experiences of the team from a range of professions to facilitate better working with the service users:

> "…I mean you get a difference of opinions… every member of staff has their strengths and weaknesses. That's how teams work, isn't it? One person might be struggling with a particular service user whereas another one finds that service users are quite easy to manage, for a better term. So it's nice that we can all put ideas together…" (Sally)

Having a valued voice

Both groups allowed staff to feel heard and important within the wider staff team; particularly those who spend a significant portion of their shifts having face-to-face contact with service users:

> "…as support staff we aren't even invited into MDT's so all we get is an email explaining what has been discussed and then directing us to Rio for the full writeup. As support staff, we have no input whatsoever into the MDT. This is easy access for ground floor staff who work on the shop floor." (Sally)

This was valued in different ways within the groups. In the case discussion group, staff were able to offer their own experiences, approaches and techniques to help their colleagues. However, in the RPG, staff could voice their frustrations and concerns working with difficult service users whilst feeling heard. Before these groups, there was little opportunity to do this other than managerial supervision and almost all staff members expressed this was insufficient to meet their clinical and personal needs. Support staff voiced their appreciation for having a space to feel included; often feeling frustrated with the outlets available for them to communicate their needs and the needs of the service users they work with:

> "…we can also get a chance to put our point across as well because sometimes the other people that are higher don't see some of the things we see on the shop floor… So its another effective way…" (Tom)

Peer validation

By having a valued voice and feeling heard, staff expressed feeling validated by peers and this was a crucial gain from the groups by all staff members:

> "Because that's somebody else, 'well I had the same thing happen'…oh right! Then you discuss it, and it would make you feel better because somebody else has had the same experience as you, or you know, erm…yeah" (Joe)

Both groups provided a sense of validation to staff; particularly around shared feelings or outcomes from interventions that had not gone well. Staff expressed how stressful they found their roles, and they would often feel mental and physical fatigue. Through sharing these experiences and feeling validated by their colleagues they could continue to use the groups as a healthy outlet for their frustrations.

Similarly, the facilitator of the two groups played a role in validating staff experiences, particularly within the RPG:

> "I went to one recently ran by the psychologist and it was quite cathartic. To get a lot of things off your chest. It was quite a venting time, but it was nice to get a lot of positive feedback from the other staff in the group…. (Daisy)

Some staff highlighted how the psychologist provided a group that allowed them to talk about similar experiences that had been difficult and achieve a sense of understanding through discussion. This was subtly done by the psychologist and was acknowledged by staff as a technique that was both beneficial and necessary for the group to feel useful within their role.

Structuring and guiding the session

All staff highlighted the importance of how the groups are delivered, the approach the facilitator plays, and how this contributed towards positive experiences.

The balance between Structure vs. non-structure

Significant structural differences were highlighted between the groups. The RPG was described as unstructured to allow for expression amongst staff:

> "I like that its [reflective practice group] not so structured that you cant talk. It's very free-flowing is basically what It's saying. I think that's what I'm trying to get at. It's very free-flowing…" (Louise)

This unstructured format allowed staff to bring a multitude of topics to the group and talk about real difficulties they were facing in their role. This was important as staff felt they could discuss topics that were important to them, rather than importing their own experiences onto a pre-agreed agenda of items:

> "….I think some of the past ones….when we've had…even possibly talking about incidents and stuff like that that has happened. Again, like I say, getting a few people around a table, talking and discussing subjects like that…getting other people…I think that for me is one of the most important things". (Tom)

Alternatively, the case discussion group utilised a more structured format to give staff a clear account of what the team is expected to do moving forward:

> "…you'll agree what needs to be done and then know what you need to put into action because the points will be written down. It's a good place to start, and then bring your feedback to the next group." (Graham)

Expectations of the group were clear amongst staff and whilst a regular structure was used within each session, staff still felt able to bring their discussion points. Staff highlighted that a primary benefit of this approach was the dissemination of action points after each session. These contributed towards care plans, therapeutic approaches, and improving clinical skills.

Facilitator as a guide

The role of the facilitator was highlighted as key to the execution of a successful group session:

> "She would offer direction if we needed it, to sort of give us some structure, but it wasn't exactly 'we're gonna do this, this, and this. It was more of a 'what do you think if we did a check-in or a checkout. Very, putting it to the group, and just suggesting things. So she did take a leadership role in it..." (Daisy)

All staff members identified that within the case discussion group, the facilitator would scaffold around staff using structured psychological models. This would empower people to contribute and engage with other members of the team.

The RPG would instead introduce a level of flexibility to make all staff members comfortable, whilst remaining on the topic:

> "…that's why I find it good because the role is almost multifaceted, it could change depending on the subject matter and what we needed to speak about. I was made very comfortable as well which I thought was something that is really important as well. Because sometimes those things… I've been to stuff in the past that almost become, almost formal which just doesn't work." (Tom)

Staff appreciated the flexibility of the facilitator as this not only made them comfortable to talk about difficult issues, but also feel contained that the group would not diverge away from what was being discussed.

Differing function of groups across professions

Across both groups, there were expressed differences with regards to their function, and this was particularly prevalent between professions (i.e. qualified nurses and healthcare support staff).

The usefulness of emotional expression

Emotional expression was seen as useful for all members of staff within the RPG but more so with supporting staff who valued the protected time and space to discuss their feelings:

> "I used to make a point of saying, you're [psychologist] the one person I come to have a rant and a rave… I really enjoy it. I used to find it very, almost therapeutic in a way. But yeah, very valuable … (Tom)

Having this time was beneficial in that it allowed support staff to offload their frustrations of working with challenging service users. Support staff were clear with the function of the groups and were able to access emotional and social support effectively.

However, this view differed with some qualified staff who felt that there was a fine line between healthy emotional expression and perceived 'complaining':

"…if you've had a bad week, it's really, I think some staff would feel that was their opportunity to let it all out. So, you need to reign it in, you need to structure it. The case discussions do that… So the staff doesn't have a bit of a free for all. I can always understand it. Staff need to get things off their chest, but you work each other up" (Jane)

Qualified staff believed that both groups should use a helpful structure and stick to a single topic of discussion, with some voicing concerns that minimal structure led to poor use of time. Some support staff identified that they were aware of these views and felt that emotional expression was essential for their role as they spent a large portion of their working day with service users.

Practical applications

Qualified staff found the practical applications of the case discussion group to be the most beneficial to their day-to-day clinical work as it provided key points to action:

"…we come up with a plan as to how to work better with the service users in the future, identify things that might be beneficial, things that key workers could do, things that nurses could do" (Daisy)

This approach seemed to align well with qualified staff who explained how they're expected to produce care plans and participate in professional meetings. Support staff, however, valued the practical elements similar to the role of emotional expression; highlighting how both could be successfully used within the case discussion group:

"So it's nice that we can all put ideas together on the best way of moving forward and whatever is best for the actual individual…" (Sally)

Support staff appeared more content with approaches that were multi-faceted so that they have tools to use within their clinical roles.

Synthesis

Whilst both groups hold similarities with regards to themes/sub-themes, each also holds individual characteristics as identified by the participants. Table 27. highlight's themes expressed within each group and how these were represented.

Table 27
Synthesis of themes

		RPG	Case Discussion
Theme	**Sub-theme**		
Impact on clinical skills	*Trying new things in the relationship*	Provides an opportunity for staff to express difficult relationships with service users and hear other similar/contrasting experiences	Develop new approaches for engaging service users through previous successes/difficulties
	Confidence in the role	Sharing experiences to empower peers who feel less confident with particular service users	Sharing experiences to generate practical approaches to working and instil confidence
	New approaches to recovery	Promotes a space where individual and group feelings can be voiced and reflected upon – emotionally based approach	Promotes skill-building and the development of new evidence-based approaches – practically based approach
Team cohesion	*Shared knowledge*	Sharing experiences to overcome barriers when working with service users	Sharing individual skills and knowledge to carry out their role more effectively
	Having a valued voice	Staff can voice frustrations and feel heard by the team regardless of their role	Giving a voice to staff who felt unheard and have knowledge that can be shared
	Peer validation	Validation can be achieved through the facilitator overseeing the discussion	Staff can feel validated by peers through shared mental fatigue from their role
Structuring and guiding sessions	*The balance between structure vs. non-structure*	Staff appreciated the lack of structure enabling them to talk about their own experiences without needing to fit into an agenda	Staff found a regular structure helpful for following up topics with action points
	Facilitator as a guide	The facilitator introduces a topic and allows the group to speak. They intervene when the topic diverts and contain the group	The role of the facilitator is to scaffold around staff using structured psychological models to guide sessions
Differing function of groups across professions	*The usefulness of emotional expression*	Provided a protected time and space to express feelings	Contextually express feelings and use to work with service users
	Practical applications	Promoted health emotional expression which is needed to function within their role	Allowed qualified and support staff to develop and then plans created to form the group (e.g. treatment plans)

Discussion

RPGs and case discussion groups continue to generate evidence of positive impacts on clinical staff in mental health settings (Geach, Moghaddam, & De Boos, 2018; Fenton & Kidd, 2020). However, the best practice for delivering these groups is minimal. This evaluation, therefore, aimed to explore the experiences of staff taking

part in RPGs and case discussion groups to identify their perceived impact on clinical practice. This also included exploring implications for professionals delivering these groups, stakeholders, and management, who allocate time and resources towards them.

The RPG was useful for sharing experiences where staff felt less confident working with service users. These conversations were facilitated by the psychologist in a way that encouraged staff to bring shared and differing experiences together; allowing them to feel less 'alone' within their situation. This was important for creating a sense of cohesion and 'team bonding'; a factor that is seen as imperative for gaining focus and commitment amongst staff (Baskind, Kordowicz, & Chaplin, 2010). Staff also expressed how accessing a protected space for emotional support was beneficial. Working within mental health settings can be extremely challenging for staff members (Dawber, 2013), and having a space to express these feelings and receive feedback from colleagues can be validating. Through this, the staff team became more cohesive in their approach and this positively impacted clinical skills and allowed the team to openly exchange ideas and experiences and put their well-being as well as the service users at the forefront.

The case discussion group highlighted the practical elements that staff valued within their professional development, such as developing care plans and action points for working with challenging service users. Whilst this has previously been highlighted (Rowe & Nevin, 2013), within this context, staff were able to feel empowered within their clinical role. This transcended across all roles, with each staff member valuing the clinical skills and approaches offered by the group. This was particularly linked with beliefs and perceptions of service user behaviour and treatment progress (DCP, 2011). The group offered a unique opportunity to challenge negative beliefs around service users by generating practical interventions through team formulation. This 'psychologically minded approach was beneficial to the whole staff team, regardless of role or amount of contact with individuals.

A pivotal finding was the role of structure within the groups and how this can influence staff engagement. Case discussion groups were welcomed for their structure and this aligned well with most staff members. However, support staff expressed how the RPG was delivered in a way that was unfamiliar but beneficial to their role. This was through psychology facilitating in an unstructured way and was a nuance shift to

established approaches to recovery; allowing staff to examine service users with a fresh perspective. This was not shared amongst qualified nurses who highlighted the different functions of the groups as well as the gains from attending. This was seen to influence staff members willingness and motivation to attend, with qualified staff less likely to attend the RPG, but support staff to attend both groups consistently. The evaluation has highlighted that both groups offer benefits to staff and can be successfully run alongside each other; with each group serving a different function.

Limitations

Whilst an unstructured approach to interviews was useful to address the aims of this evaluation, it could be argued that it's difficult to ensure continuity with lines of enquiry during interviews. Limited evaluations have been carried out around implementing groups concurrently, and establishing a broad understanding was therefore important. Future evaluations would benefit from using these results to develop a more structured interview schedule to validate the findings, as well as gain a more in-depth understanding of individual staff experiences. This could involve developing a more concrete structure for case discussion groups as well as guidance for professionals delivering RPGs. It's also important to acknowledge that this evaluation was conducted within an inpatient setting. Future evaluations within community settings would allow these results to be generalised further.

Recommendations

The main recommendations from this evaluation are:

1. The service should continue to offer both groups as they are reported by staff to improve patient care and wellbeing. Staff reported reduced anxiety and increased confidence in their role, which is important for wellbeing
2. Both groups should continue to focus on patient-staff relationships, promote team working and offer practical solutions to be implemented for staff to use on the ward. Steps should be taken to ensure that these are at the centre of the groups.
3. For the RPG, an unstructured approach is seen to be useful (i.e. no fixed agenda) but the facilitator should still ensure that staff members don't diverge onto other topics.

4. For case discussion groups, a consistent and structured approach should continue so that staff feel upskilled, changes in service user input can be monitored, and the staff team can offer equal input. The structure involves a regular format agreed by the team.
5. The RPG should focus on increasing emotional expressiveness and allowing staff to share their experiences and feel contained and supported.
6. Groups should aim to address service user care as well as staff wellbeing
7. The service should continue to bring staff members together and provide a space for sharing ideas, experiences, difficulties and successes. This can be practical, or through facilitating meaningful conversations within the groups.

References

Baskind, R., Kordowicz, M., & Chaplin, R. (2010). How does an accreditation programme drive improvement on acute inpatient mental health wards? An exploration of members' views. *Journal of Mental Health, 19*(5), 405-411. doi:10.3109/09638230903531118

Binks, C., Jones, F. W., & Knight, K. (2013). Facilitating reflective practice groups in clinical psychology training: A phenomenological study. *Reflective Practice, 14*(3), 305-318. doi:10.1080/14623943.2013.767228

Boud, D., Keogh, R., & Walker, D. (Eds.). (2013). *Reflection: Turning experience into learning*. Routledge. doi:10.4324/9781315059051

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3(*2), 77-101. doi:10.1191/1478088706qp063oa

Brown, D., Igoumenou, A., Mortlock, A. M., Gupta, N., & Das, M. (2017). Work-related stress in forensic mental health professionals: a systematic review. *Journal of Forensic Practice, 19*(3), 227-238. doi:10.1108/JFP-05-2016-0024

Christofides, S., Johnstone, L., & Musa, M. (2012). 'Chipping in': Clinical psychologists' descriptions of their use of formulation in multidisciplinary team working. *Psychology and Psychotherapy: Theory, Research and Practice, 85*(4), 424-435. doi:10.1111/j.2044-8341.2011.02041.x

Cottrell, S. (2017). *Critical thinking skills: Effective analysis, argument and reflection*. Macmillan International Higher Education. doi:10.1057/978-1-137-55052-1

Dawber, C. (2013). Reflective practice groups for nurses: a consultation liaison psychiatry nursing initiative: part 2-the evaluation. *International Journal of Mental Health Nursing, 22*(3), 241-248. doi:10.1111/j.1447-0349.2012.00841.x

Division of Clinical Psychology. (2011). *Good practice guidelines on the use of psychological formulation*. Leicester, England: British Psychological Society

Dubé, V., & Ducharme, F. (2015). Nursing reflective practice: An empirical literature. *Journal of Nursing Education and Practice, 5*(7), 91-99. doi:10.5430/jnep.v5n7p91

Fenton, K., & Kidd, K. (2020). Reflective practice groups in a mental health in service users setting. *Mental Health Practice, 23*(3). doi:10.7748/mhp.2019.e1333

Geach, N., Moghaddam, N. G., & De Boos, D. (2018). A systematic review of team formulation in clinical psychology practice: Definition, implementation, and outcomes. *Psychology and Psychotherapy: Theory, Research and Practice, 91*(2), 186-215. doi:10.1111/papt.12155

Hall, K., & MacLean, L. (2018). If the Measure Doesn't Fit, Invent One that Does: Developing Individualized Feedback Measures for Supervision. *Journal of Systemic Therapies, 37*(4), 1-14. doi:10.1521/jsyt.2018.37.4.1

Heneghan, C., Wright, J., & Watson, G. (2014). Clinical psychologists' experiences of reflective staff groups in inservice users psychiatric settings: a mixed-methods study. *Clinical Psychology & Psychotherapy, 21*(4), 324-340. doi:10.1002/cpp.1834

Johnson, J., Hall, L. H., Berzins, K., Baker, J., Melling, K., & Thompson, C. (2018). Mental healthcare staff well-being and burnout: A narrative review of trends,

causes, implications, and recommendations for future interventions. *International Journal of Mental Health Nursing, 27(*1), 20-32. doi:10.1111/inm.12416

Johnstone, L. (2013). Using formulation in teams. In *Formulation in Psychology and Psychotherapy* (pp. 236-262). Routledge. doi:10.4324/9780203380574

Killaspy H., Marston L., Omar, R.Z., Green, N., Harrison, I., Lean, M., Holloway, F., Craig, T., Leavey, G. & King, M. (2013b) Service quality and clinical outcomes: an example from mental health rehabilitation services in England. *The British Journal of Psychiatry 202*(1): 28-34. doi:10.1192/bjp.bp.112.114421

Mann, K., Gordon, J., & MacLeod, A. (2009). Reflection and reflective practise in health professions education: a systematic review. *Advances in health sciences education, 14*(4), 595-621. doi:10.1007/s10459-007-9090-2

Mastoras, S. M., & Andrews, J. J. (2011). The supervisee experience of group supervision: Implications for research and practice. *Training and Education in Professional Psychology, 5*(2), 102. doi:10.1037/a0023567

Rousseau, C., Johnson-Lafleur, J., Papazian-Zohrabian, G., & Measham, T. (2020). Interdisciplinary case discussions as a training modality to teach cultural formulation in child mental health. Transcultural psychiatry, 57(4), 581-593. doi.org/10.1177/1363461518794033

Rowe, G., & Nevin, H. (2013). Bringing "service users voice" into psychological formulations of in-service users with intellectual disabilities, autism spectrum disorder and severe challenging behaviours: report of a service improvement

pilot. *British Journal of Learning Disabilities*, *42*(3), 177-184. doi: 10.1111/bld.12026

Summers, A. (2006). Psychological formulations in psychiatric care: staff views on their impact. Psychiatric Bulletin, 30(9), 341-343.

Sullivan, S., & Glanz, J. (2000). Alternative approaches to supervision: Cases from the field. *Journal of Curriculum and Supervision, 15*(3), 212-35.

Thomas, M., & Isobel, S. (2019). 'A different kind of space': Mixed methods evaluation of facilitated reflective practice groups for nurses in an acute in service users mental health unit. *Archives of psychiatric nursing*, *33*(6), 154-159. doi:10.1016/j.apnu.2019.08.011

Whitton, C., Small, M., Lyon, H., Barker, L., & Akiboh, M. (2016). The impact of case formulation meetings for teams. Advances in Mental Health and Intellectual Disabilities.

Whomsley, S. (2010). Team case formulation. *Reaching out: The psychology of assertive outreach*. Routledge

Zhang, Y., & Wildemuth, B. M. (2009). Unstructured interviews. *Applications of social research methods to questions in information and library science* (2nd ed.). Libraries Unlimited.