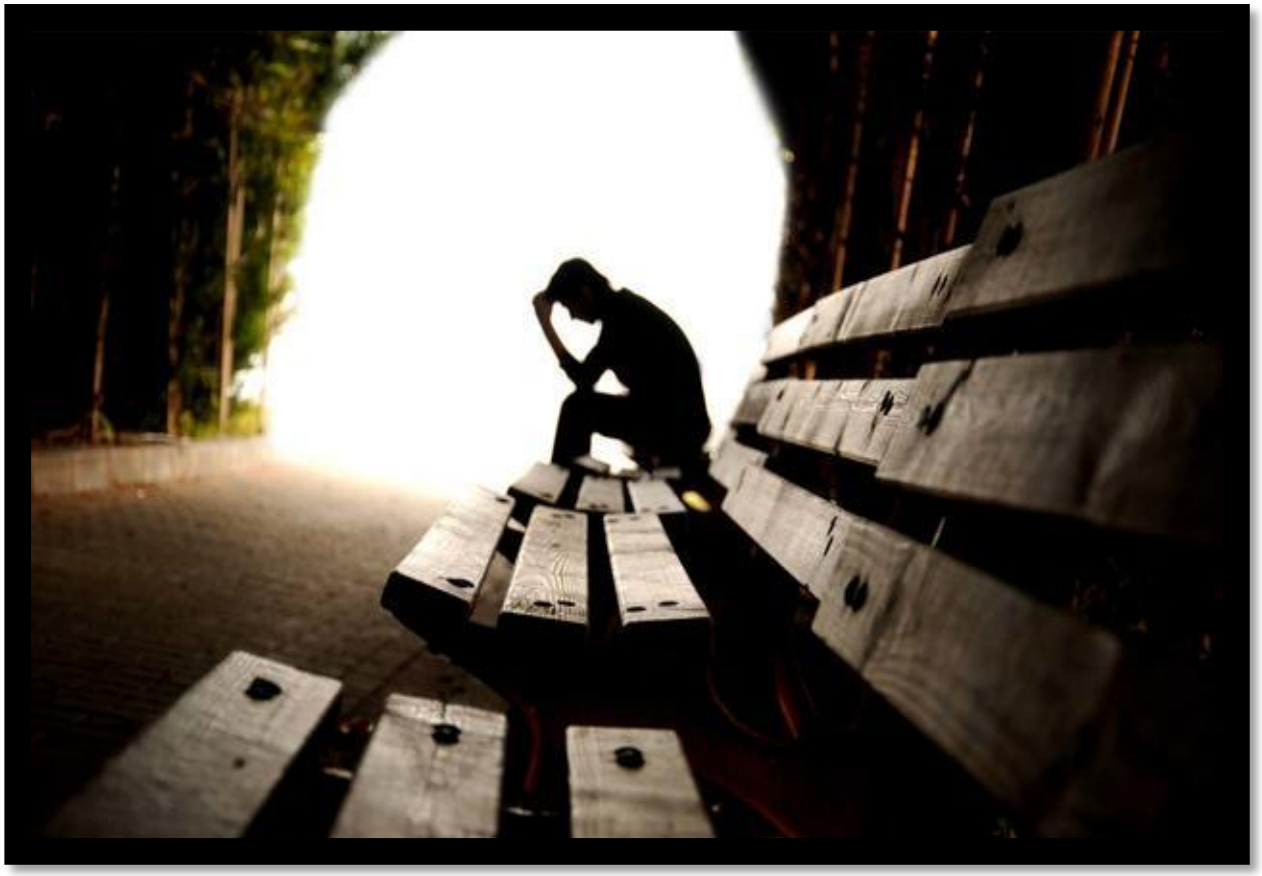

Developing a holistic intervention to reduce social isolation and loneliness in veterans treated for PTSD

THE ARMED FORCES COVENANT FUND TRUST

Northumbria University NEWCASTLE

The Northern Hub for Veterans and Military Families Research

Established in 2014, the Northern Hub for Veterans and Families Research sits within Northumbria University Newcastle. It is a collaboration of academics, service providers and service users interested in improving the health and social well-being of Armed Forces veterans and families.

The Research Team for this project

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Acknowledgement

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We would also like to extend our gratitude to the Daparian Foundation[1], which facilitated the recruitment of the participants and provided ongoing support to those who participated in the research.

The Armed Forces Covenant Fund

We thank the Armed Forces Covenant Fund Trust for their invaluable contribution in instigating this research into such an important issue – from inception through to dissemination of the research findings.

[1] The Daparian Foundation is a non-profit, UK Veteran & Emergency Services, PTSD research organisation.

Forward

> "The longing for interpersonal intimacy stays with every human being from infancy throughout life…… born with the need for contact and tenderness; there is no human being not threatened by its loss".
>
> (Fromm-Reichmann, 1959, pg. 3)

Veterans who experience persistent difficulties in maintaining feelings of authentic 'belongingness' often experience a sense of deprivation. This loss often presents itself in the form of depression, anxiety, anger, trauma, grief, and loneliness. In aspiring towards positive mental and physical health satisfying social relationships are essential.

The absence of intimacy, connection, and confirmation of our identity, often leaves individuals emotionally, psychologically, physically, occupationally, and socially abandoned.

Enhancing our understanding of loneliness and social isolation within the veteran community requires a rethinking of the diagnosis of post-traumatic stress disorder (PTSD). For the traumatised veteran, many symptoms are not captured by the existing ICD-11/DSM-5 criterion for PTSD. Obtaining a more rounded understanding of the links between the veteran's experience of PTSD, loneliness, and social isolation is imperative towards developing interventions that can be helpful.

However, any intervention moving forward must be holistic in its approach with the veteran at its heart. For veterans, experiencing an authentic sense of belonging is more than a psychological state, it requires broader, community empowerment and support.

This report into developing a holistic intervention to reduce social isolation and loneliness in veterans treated for PTSD provides a critical insight into the nature of veteran's lived experiences, and explores a productive, and contemporary framework in moving forward.

Professor Derek Farrell MBE
7th July 2023

Contents

Summary

Social isolation and loneliness are increasingly becoming a concern for health and social care policy and practice. Within the current academic literature these experiences identify as critical indicators of risks associated with poor emotional and physical health and premature death (Holt-Lunstad et al., 2015). Recent studies by Guthrie-Gower and Wilson-Menzfeld (2022) highlight that social isolation and loneliness among ex-military individuals often correlate with post-traumatic stress disorder, depression, and suicidal ideation, alongside declining physical health (Solomon, Dekel, and Mikulincer, 2008; Martin and Hartley, 2017; Teo., et al. 2018).

Life events that mark a transition period can unintentionally lead to social isolation and loneliness. In the military community, transitioning into the military, frequent moves or postings, exposure to combat during service, and leaving the military are experiences identified as increasing the risk of social isolation and loneliness for veterans (Wilson, Hill & Kiernan, 2018; Kiernan et al., 2018; Stapleton, 2018).

Although there is emerging evidence and academic literature, there is still a lack of research on the lived experiences of veterans with PTSD, social isolation, and loneliness. Additionally, there is a lack of rigour in theory and practical interventions to address social isolation and loneliness within the veteran population, especially those with PTSD. Contributing to this critical issue provided the rationale for this study.

To best capture the lived experiences of veterans with PTSD, loneliness, and social isolation this study used three distinct phases to generate a broader narrative as possible. The first phase used a scoping exercise involving N=20 participants who completed two psychometric measures. The first measure explored veteran's experiences of emotional and social loneliness, and the second, their current connection with social networks. An analysis of this psychometric data revealed prominent levels of emotional and social isolation, and moderate levels of loneliness in the veteran population who took part.

Phase two involved conducting in-depth narrative interviews with N=16 research participants within the veteran population. Each interview, following transcription, being then analysed using Framework Analysis (Richie et al., 2013). This process yielded four distinct themes, as outlined in figure 1:

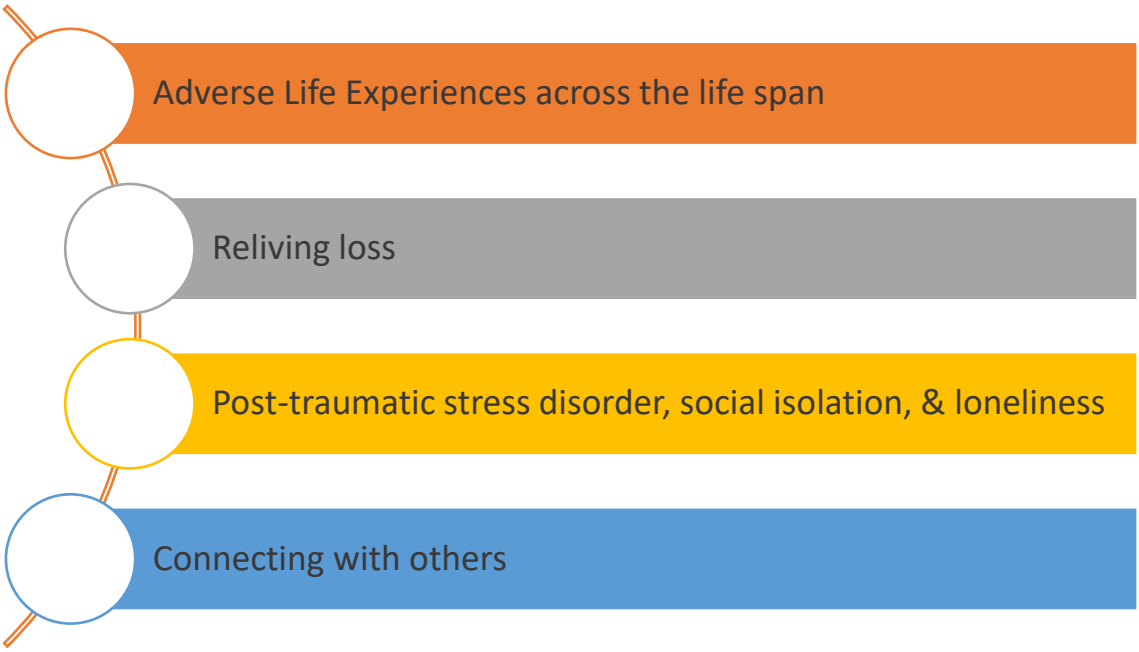


Figure 1: Four primary themes from the Framework analysis of the lived experiences of PTSD veterans

Building upon the results from phases one and two, phase three involved an online co-production event attended by fifty-eight delegates. These delegates shared their perspectives on social isolation and loneliness from different viewpoints, including lived experiences as veterans or families, service providers from different sectors, and researchers from various universities. The data collected from this event was then subsequently analysed.

During this phase, delegates focused on the challenges of reducing social isolation and loneliness from a service perspective. They discussed how they measure the effectiveness of interventions to address social isolation and loneliness among PTSD veterans. The second part of the co-production event involved discussing ways to support the identification, connection, and engagement of the PTSD veteran population to reduce social isolation and loneliness, including skill sets, training, and education.

Overview of the main findings

- Within the veteran community, there appears to be correlation between PTSD, loneliness, and social isolation.
- The veteran participants within this study identified as at significant risk of social isolation.
- Additionally, the veteran participants identified as medium risk of loneliness.
- Results suggest a link between PTSD and adverse child experiences (ACE) within the veteran populations.
- Adversity across the life span significantly impacted the increase of feelings of loneliness and increased social isolation.
- Reliving the loss of relationships with friends, family members, and their identity increased social isolation and loneliness.
- The participants reported their PTSD symptomology, and its presentation significantly affected their relationship with service providers and increased their risks of withdrawing from service due to a lack of compassion, understanding and being passed from service to service.
- Many participants had difficulties understanding and connecting to themselves, their families, and their communities. This lack of connection increased feelings of loneliness and isolated them socially.
- All the participants highlighted that they wanted a cohesive and collective assessment which could be used throughout engagement, so they did not have to retell their stories, service providers had all the information needed, and that importantly, it included their families.

Recommendations

The recommendations outlined in this report are aimed at tackling social isolation and loneliness within the PTSD veteran and family's population. In addition, suggestions are offered as to possible direction towards future research & development, policy initiatives, and strengthening practice-based evidence using a 'Common Assessment Framework' specific to the needs of the veteran, and their families. for veterans and their families.

The recommendations are summarised below and are discussed in full within this report.

1. Further consultation and collaboration in developing a Veteran & Family Common Assessment Framework (V&F-CAF) that is 'fit for purpose' – with the veteran and family are its core.
2. This V&F-CAF will then be used as an educational/instructional framework to aid service providers and key stakeholders in addressing the core components of PTSD. Loneliness, and Self Isolation within the veteran population
3. To utilise 'Co-production' as a specific dissemination device with key stakeholders/ service providers, and agencies specifically focussed on veteran affairs.
4. At the core of the V&F-CAF, is an instructional device, the acronym ICE (Identify – Connect – Engage), to effectively target the right veteran, in the right way, with the right help and support to address PTSD, Loneliness, and Social Isolation.

Introduction

Background

Comorbidity exists between loneliness and Post Traumatic Stress Disorder (PTSD) symptomology (Gettings *et al.,* 2022). Ypsilanti *et al.*, (2020) theorised that self-disgust and loneliness simultaneously predict PTSD symptomology, and that these two measures play a cooperative role in predicting anxiety and depression. Wilson, Hill, and Kiernan (2018) identified veterans as experiencing a particularly idiosyncratic genus of loneliness defined by their military experiences. Stein and Tuval-Mashiach (2015) coined the term 'experiential isolation' to describe the psychological situation of traumatized veterans. They highlight that veterans find it difficult to connect emotionally with their loved ones and friends. Furthermore, they feel a disconnect from their moral values and no longer share common ground with those they once trusted. The consequences of this leaving veterans feeling isolated and estranged from the people they used to feel comfortable around. Stein and Tuval-Mashiach (ibid) speculate that it is if the ethical and social guidelines the veteran once knew has shifted, leaving them feeling lost, lonely, and isolated.

Although there have been strides made in the treatment of PTSD, and increasing its availability to veterans, there is still a lack of resources available to help alleviate the persistent feeling of loneliness that can follow post-treatment. Therefore, it is crucial to develop post-treatment interventions and support that promote a more comprehensive approach to reducing loneliness and help veterans reconnect with their loved ones and society.

As Stein et al (2017) explores, loneliness experienced by veterans with PTSD can be isolating, causing them to feel disconnected from their support networks and trapped in a cycle of depression, destructive behaviour, and suicidal thoughts. The consequences of these conflating factors create a further cycle of disconnection, isolation, and loneliness, which, as Basham (2008) highlights, is frequently misinterpreted or missed by mental health workers altogether during diagnosis, treatment planning and intervention – as highlighted in figure 2.

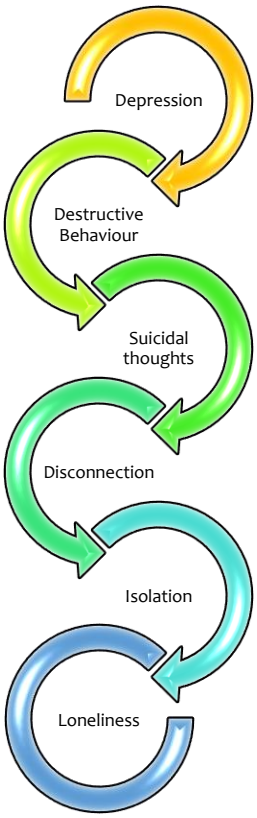


Figure 2: From low mood to loneliness

Whilst an emerging evidence base highlights the loneliness and social isolation of military personnel and veterans (Stapleton, 2018, Kiernan et al., 2018), relevant research is absent (Stein and Tuval-Mashiach, 2015).

Loneliness is subjective and experienced even in the presence of others. Armed Forces personnel develop a distinctive sense of identity, a 'Fictive Kinship' (Woodward and Neil Jenkins, 2011), predisposing them to an idiosyncratic loneliness defined by their experiences (Wilson et al., 2018). This research project used a dual-phased, peer-centred approach to develop an intervention to improve the lives of this community and reduce loneliness and social isolation, seeking to develop a replicable and bespoke intervention negating other clinical therapy.

This intervention contributes primarily to the programme theme of building emotional resilience to overcome the causes of loneliness. It should also contribute to veterans building more robust social networks and friendships and becoming more active within their local communities and building social community networks.

Project Methodology

Aims

Loneliness experienced by PTSD diagnosed veterans can further isolate an individual within their experiences, thoughts, and symptoms, alienating them from support networks and locking them into a cycle of depression, destructive behaviour, and suicidality (Stein et al, 2017). This experience is idiosyncratic and often misinterpreted during diagnosis and subsequent care (Basham, 2008). Whilst there's an emerging evidence-base highlighting the loneliness and social isolation of military personnel and veterans (Kiernan et al., 2018; RBL, 2014; Stapleton, 2018; Wilson, Hill & Kiernan, 2018) there is an absence of relevant research specifically focussing on PTSD (Stein and Tuval-Mashiach, 2014).

This study aimed to develop and design a post-clinical treatment intervention for PTSD diagnosed veterans who experience ongoing loneliness and social isolation, which will be available to all, accessible, user-friendly and without cost.

In regard towards developing any such intervention, it is imperative to place the veteran at the centre of any solution, ensuring that any such intervention is evidence-based, truly capturing the veteran's lived experience, and is easily accessible.

To achieve this there are two distinct aims:

1. The primary aim of the project was to understand the 'lived experience' of veterans with PTSD who have experienced social isolation and loneliness and to identify unmet need both from the perspective of the veteran and agencies supporting the veteran population.
2. The second aim was to develop and design a post clinical treatment intervention for PTSD diagnosed veterans who are experiencing social isolation and loneliness.

Research Design

The study used an iterative process over three phases, with each phase informing the next, incorporating a mixed methods design aimed towards an enhanced and authentic understanding of the lived experience of social isolation and loneliness of the

PTSD/veteran. From this capture, to then design and develop a post-clinical treatment intervention.

To summarise, this project utilised a mixed method, multi-phase study, applying a social policy approach.

Target population for the study:

To ensure that phases 2 and 3 were specifically targeted towards the PTSD/ Veteran experience of social isolation and loneliness, phase 1 was essential in determining inclusion within the research participant group. To achieve this required a diagnosis of PTSD/ Complex PTSD, within a veteran population who experience social isolation and loneliness. A target population of N=20 was recruited to the study in phase 1, in preparation for phases 2 and 3. The research priority was authentically capturing the veteran's narrative, and as the sample group is only twenty participants, no inference will be drawn from the participant group.

The following sections outlines the core aspects of each of these three phases.

Phase 1: Scoping Exercise

Phase one: Systematic Narrative Review of Literature

To identify where they may be gaps in the literature and inform phase two of the study, a review of papers on PTSD, loneliness and social isolation covering a life span of military veterans was conducted (Appendix 1). This review aimed to synthesize existing evidence incorporating elements of social connection, social isolation, and loneliness within interventions for military veterans with a diagnosis of PTSD, consequently aiming to examine the impact of such interventions upon this community.

This systematic narrative review is now published in an open access journal, with the following citation:

- Gettings, R. D., Kirtley, J., Wilson-Menzfeld, G., Oxburgh, G. E., Farrell, D., & Kiernan, M. D. (2022). ***Exploring the Role of Social Connection in Interventions with Military Veterans Diagnosed with Post-traumatic stress disorder: Systematic Narrative Review.*** *Frontiers in Psychology*, 3646.

Abstract:

Background: It has been identified that military veterans have distinct experiences of loneliness and social isolation and, when comparing this community to other client groups with a PTSD diagnosis, veterans respond less favourably to treatment. However, the link between PTSD and loneliness for veterans remains insufficiently researched and it is unclear if there are effective interventions tackling this distinct experience of loneliness.

Aims: This systematic narrative review aimed to synthesize existing evidence incorporating elements of social connection, social isolation, and loneliness within interventions for military veterans with a diagnosis of PTSD, consequently aiming to examine the impact of such interventions upon this community.

Methods: Six databases were searched, utilizing relevant search criteria, with no date restrictions. Articles were included if they involved intervention or treatment for military veterans with PTSD and considered elements of social connection, social isolation, and/or loneliness. The initial search returned 202 papers. After exclusions, removal of duplications, and a reference/citation search, 28 papers remained and were included in this review.

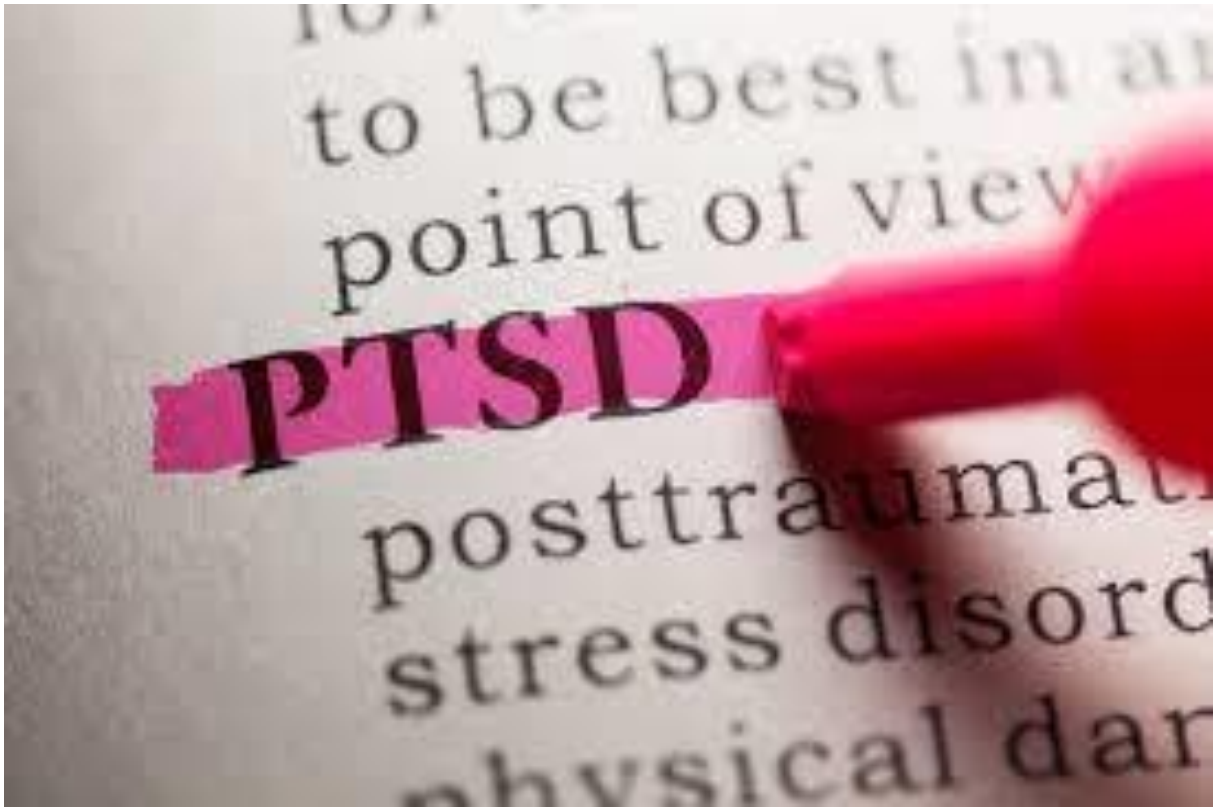
Results: From the 28 studies, 11 directly addressed social isolation and two studies directly addressed loneliness. Six themes were generated: (i) rethinking the diagnosis of PTSD, (ii) holistic interventions, (iii) peer support, (iv) social reintegration, (v) empowerment through purpose and community, and (vi) building trust.

Conclusions: A direct focus upon social reintegration and engagement, psychosocial functioning, building trust, peer support, group cohesiveness and empowerment through a sense of purpose and learning new skills may mitigate experiential loneliness and social isolation for veterans with PTSD. Future research and practice should further explore the needs of the PTSD-diagnosed veteran community, seek to explore, and identify potential common routes toward the development of PTSD within this community and consider bespoke interventions for tackling loneliness.

To briefly summarise this paper, six data bases were searched, using relevant search criteria, with no date restrictions. Articles were included if they involved interventions or treatment for military veterans with PTSD and considered elements of

social connection, social isolation, and/or loneliness. From the 28 identified studies, 11 directly addressed social isolation and 2 studies directly addressed loneliness. Six themes were generated: (i) rethinking the diagnosis, (ii) holistic interventions, (iii) peer support, (iv) social integration, (v) empowerment through purpose and community and (vi) building trust. A direct focus upon social reintegration and engagement, psychosocial functioning, building trust, peer support, empowerment and belonging mitigated the experiential loneliness and social isolation for veterans with PTSD. The review concluded further research should be conducted with a population of veterans with PTSD who are experiencing social isolation and loneliness and seek to develop a bespoke intervention to tackle social isolation and loneliness and connect this population to their communities.

This comprehensive review of the contemporary, academic literature enabled moving forward to phase 2 of the study – engagement in capturing the lived experiences of PTSD veterans, firstly through utilising psychometric data, secondly – in-depth, qualitative interviews.



Phase 2:
Capturing the lived experience of PTSD veterans

Data collection

To determine the level of PTSD and loneliness within the participatory group we had to determine the characteristics of the participants in relation to age, gender and time served in the Armed Forces. Moreover, the determining factor of participation was to check and ensure that within the maximum variance sample we were including participants who had a diagnosis of PTSD and that they are experiencing social isolation and loneliness.

Phase two was conducted in two parts. The first part was to determine the aforementioned factors and used psychometric data including the De Jong-Gierveld (2006) – a six item scale for assessing overall emotional and social loneliness. A second measure - the Lubben (2006) Social Network Scale, was also used to ascertain levels of social isolation and loneliness within in the PTSD veteran population. The screening tools were conducted in person prior to the qualitative interviews. A total of N=20 participants undertook this phase of the project.

The second part of phase two was conducted seven days after the first part was concluded. The answers to the scales and the findings from phase one's narrative review of the literature informed the development of the semi structured interviews, to capture the lived experience of living with PTSD and experiencing social isolation and loneliness.

Quantitative Data Collection

Part one of the data collection phase required the participants to undertake psychometric screening, to determine the level of loneliness and social isolation experienced by veterans with PTSD. As Table 1 highlights, the study cohort consisted of 20 participants, 18 males and 2 females who undertook the screening phase of the study. The participants were aged between 37 and 66 years of age, a mean age of 49.7 years [SD 7.8] and white. Eighteen of the participants serviced in the Army and two served in the Royal Navy. There were no participants from the Royal Air Force. Psychometric data captured included Adverse Childhood Experiences, Benevolent Childhood Experiences, Impact of Events Scale – Revised (IES-R), General Anxiety Disorder (GAD-7), Patient Health Questionnaire (PHQ-9), and the International Trauma Questionnaire (ITQ) (Appendix 2.

The rationale for this was in adherence with the study's inclusion criteria in capturing veterans with a diagnosis of PTSD/Complex PTSD.

Category	Results
Age	Mean 37.7 (SD 7.88)
Age Range	37 - 66 years
Gender	Male = 18
	Female = 2
Ethnicity	White
Arm of Service	Army = 18 Navy = 2 RAF = 0
Length of Service	Mean 13.7 (SD 7.33)
Range of Service	4 - 26 years
Mean Adverse Childhood Experiences (ACE) score[2]	4.25
Highest ACE	
○ History of physical abuse	Mean 0.7 (SD .47)
○ History of emotional neglect	Mean 0.65 (SD .49)
○ History of psychological abuse	Mean 0.65 (SD .49)
Mean Benevolent Childhood Experiences (BCE) score	3.75
Highest BCE	
○ At least one teacher who cared	Mean 0.60 (SD .49)
○ Comfortable with self	Mean 0.55 (SD .51)
○ Enjoyment at school	Mean 0.50 (SD .51)
General Anxiety Disorder (GAD 7)	Mean 13.3 (SD 6.51)
Patient Health Questionnaire (PHQ-9)	Mean 15.6 (SD 7.66
Impact of Events Scale -revised (IES-R)	Mean 59.06 (SD 13.39)
International Trauma Questionnaire (ITQ) [PTSD]	Mean 19.25 (SD 4.04)
ITQ (Disturbance in self-organisation)	Mean 16.85 (SD 5.63)
ITQ PTSD threshold met	100%
ITQ Complex PTSD threshold met	100%

Table 1: Phase 1 Descriptive data

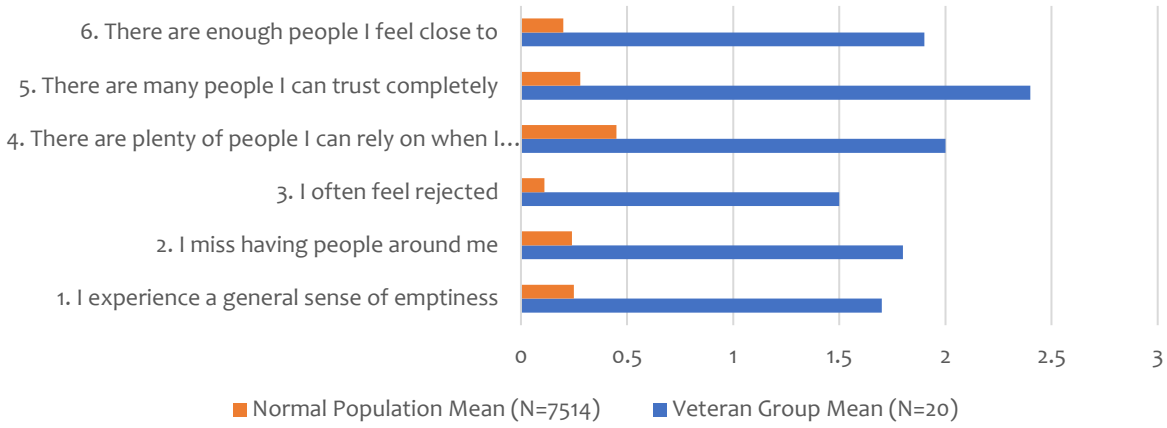
Analysis and Results

Figure 3 highlights the results of the De Jong Gierveld Loneliness Scale (2006), which is a 6-item scale, three statements are made about 'emotional loneliness' and three

[2] Adverse Childhood Experiences (ACE) scale & Benevolent Childhood Experience (BCE) scale consists of tem items with each element scoring one.

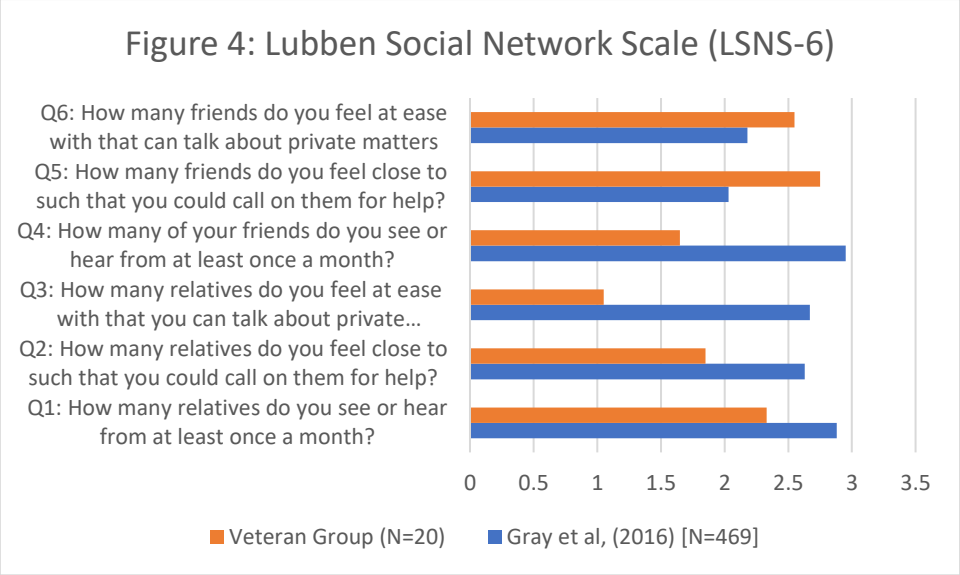
about 'social loneliness'. Social loneliness (SL) occurs when someone is missing a wider social network and emotional loneliness (EL) is caused when and individual misses an intimate relationship. The data set was also compared with a normal adult population as a comparator (De Jong Gierveld & Van Tilburg, 2010).

Figure 3: De-Jong Gierveld Loneliness Scale Descriptive Results between populations - Mean Scores



The De Jong-Gierveld screening results demonstrated the following: Emotional Loneliness – 2.45 (SD 0.89), Social Loneliness – 1.3 (SD 1.08). The total Loneliness score of 3.75 (SD 1.59) demonstrating this cohort being moderately lonely.

Figure 5 highlights the results for the Lubben Social Network Scale (LSNS). This metric is a brief instrument designed to gauge social isolation in older adults by measuring perceived social support received by family and friends. In comparison with a larger population (Gray et al, 2014), veteran scores were less on four indicators, particularly regarding support from relatives/ family.



The data set from the N=20 veterans who took part in phase one of this study highlights that the Lubben Social Network Screening scored 19.2 across the cohort. This suggests, according to this scale, that this participating cohort were at risk of social isolation.

Overall, the results of the screening exercised that our research population met criteria for PTSD, Loneliness, and Social Isolation.

Phase Two: Qualitative Interviews

Methodology

Social applied research concentrates on finding solutions to immediate practical problems (Richie and Spencer, 2002), and has a key role to play in providing insight, explanations, and theories of social behaviour. Framework analysis of qualitative data sits at the heart of applied policy research methodology. Framework analysis has been used to help achieve specified aims and outputs as well as to facilitate systematic analysis of data (Richie., et al 2013). This method was chosen for its capacity to handle data in a rigorous, transparent, and logical process of thematic analysis. The process consists of five phases, consisting of: familiarisation, identifying a thematic framework, indexing, charting, and mapping and interpretation (see figure 5).

Method

Setting

Due to COVID-19 the interviews were carried out virtually by Teams and recorded, enabling the participants to undertake the research whilst in their own home. The participants were able to have a member of their family or friend accompany them during the interview if they wished, ensuring they were not alone during or on the completion of the interview. This approach was also to support the participants and was underpinned by Northumbria University's safeguarding policy, in line with the national safeguarding agenda.

Sample

Recruitment of the participants was via the Daparian Foundation CIC through its organisation and network within the veteran community. 20 PTSD diagnosed UK military veteran volunteers were asked to complete pre-validated scales and participate in interviews. The inclusion criterion for this study were, participants must have served in HM Forces and must have a PTSD diagnosis for more than a year. Participants must have been treated for PTSD and treatment has been concluded (post-treatment). Participants must have experiences with loneliness relating to PTSD. Participant information, consent and support information documentation can be found in Appendix 3.

The need for the participants to complete multiple pre-validated scales relating to loneliness; social isolation; PTSD/complex PTSD; and well-being, was to make sure the study had a variant sample the determining factor of participation. This process ensured that within the maximum variance sample we were including participants who had a diagnosis of PTSD and that they are experiencing social isolation and loneliness.

Ethics:

This study has full ethical consent from Northumbria University Ethic Committee. For each phase of the study, participants were given the study information sheet and asked to sign a consent form prior to agreeing to take part in the study. Moreover, Participants were verbally asked if they wished to continue in the study at every contact point with a member of the research team.

Data collection

Data collection part 1 – Quantitative

20 participants were asked to complete multiple pre-validated scales relating to loneliness; social isolation; PTSD/complex PTSD; and well-being. Due to the originality and exploratory nature of this research it was important to use a broad range of pre-validated scales as we wanted to look at participants from a trauma lens and to capture as much of the landscape as we could to hone down on trauma narrative for interviews.

Data collection part 2 - Qualitative

Phase Two involved qualitative, semi-structured interviews with sixteen participants. Interviews aimed to collate rich narratives to understand further the experience of social isolation and loneliness from veterans with PTSD, their lived experiences of not only how PTSD affects social isolation and loneliness, but also to understand the barriers to socially connecting and integrating with the civilian community in which they live to build community capacity (Appendix 4 - Interview Schedule).

Of note four veterans withdrew after this project's confirmatory phase of ensuring we had achieved a maximum variant sample leaving 16 participants who completed the interview stage.

Category	Results
Age	37-66 [mean= 49.7] SD 8.2
Gender	Male - 16
Ethnicity	White
Arm of Service	○ Army - 14 ○ Navy - 2 ○ RAF - 0
Length of Service	4-26 years [mean =13.7 years] SD 7.2
Table 2: Phase 2 Descriptive Data	

Table 2: Participant Demographic for Individual Interviews (following 2 participant dropping out).

Data analysis

To aid the analysis of textual data NVivo 12 server was used. All data was stored on University of Northumbria Newcastle CLC server within the NVivo Server software. NVivo is a qualitative data analysis computer software package and designed for qualitative researchers working with very rich text based and/or multimedia information, where deep levels of analysis on small or large volumes of data are required.

The methodological approach used Framework analysis (Richie et al., 2013, Pope et al., 2013, Kiernan and Hill, 2018) to identify salient themes across each interview. This approach uses distinct stages highlighted in figure 5:

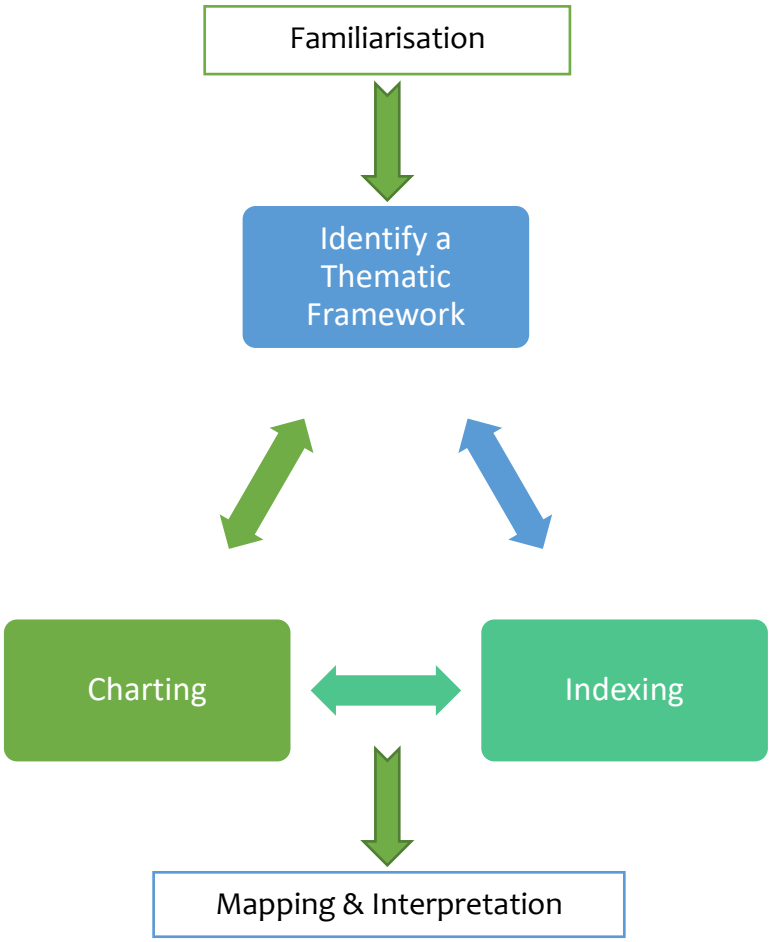


Figure 5: Five stages of Framework Analysis (Kiernan and Hill, 2018)

The overall aim of using Framework Analysis as the methodological underpinning of this part of the study, was to extract primary and secondary themes based on the participant's narratives arising from the qualitative interviews. To arrive at the primary data stage, the research team familiarised themselves with the data to assess how the data for analysis was to be used and be broken down into a dataset of a manageable size. This initial stage of this method of analysis used a pragmatic approach by reading all the data (Kiernan and Hill 2018, Pope et al., 2000). To achieve this NVivo software is used as it predominantly based on framework approach of thematic analysis.

The next stage of the process involves taking the familiarised data and identifying the key issues, concepts, and themes by which the data is referenced. This is achieved by referring to the research aims and objectives of the study and reflecting on prior issues as well as the reoccurring themes in the data (Kiernan and Hill 2018, Pope et al., 2000). By the

end of this stage the initial data was grouped into manageable chunks and thematic framework established. It is this process which led to the emerging themes in the primary data reduction stage of the analysis. It is at this stage of the process where indexing takes place, that is, where the thematic framework is systematically applied to all the data. An example of this is demonstrated in figure 6.

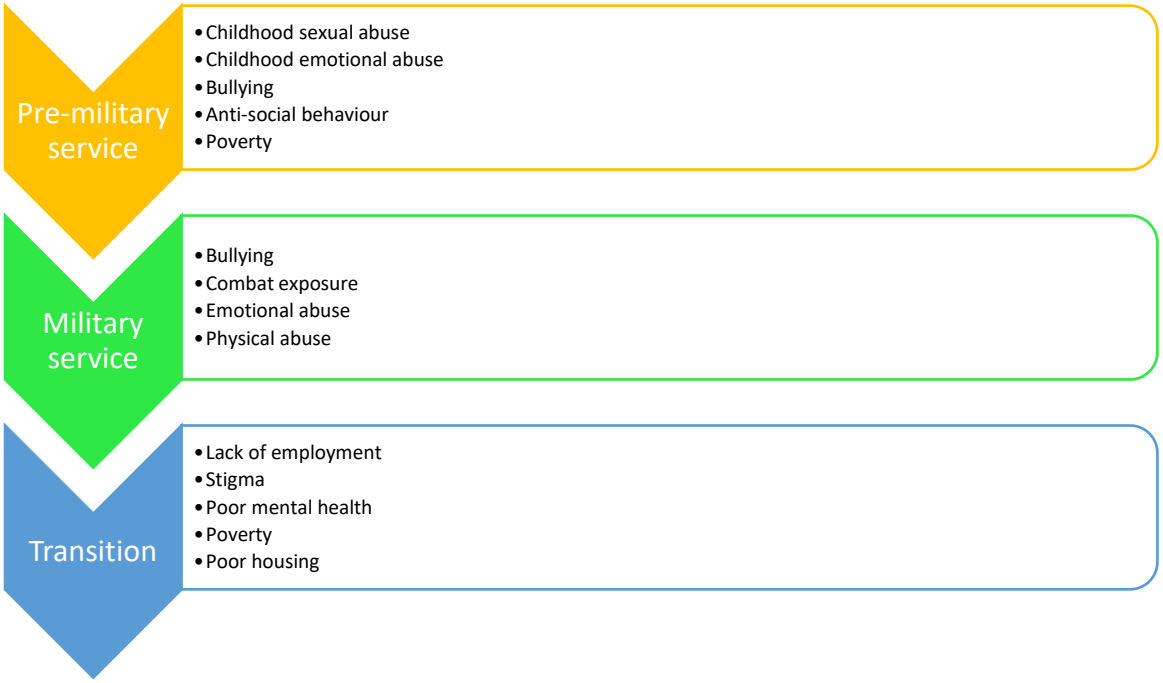


Figure 6: Development of Primary themes

The next stage of the analysis process included charting and mapping. By this stage of the data analysis process, the data had been sifted and sorted into its core themes in preparation for summary, interpretation, and mapping (Richie and Spencer, 2002). Figure 7 demonstrates this process of moving from the primary themes into the subordinate (secondary) themes which are explored in depth. Using the previous example in figure 6, the primary themes of pre-military service, military service and transition become a main theme of adversity across the life span.

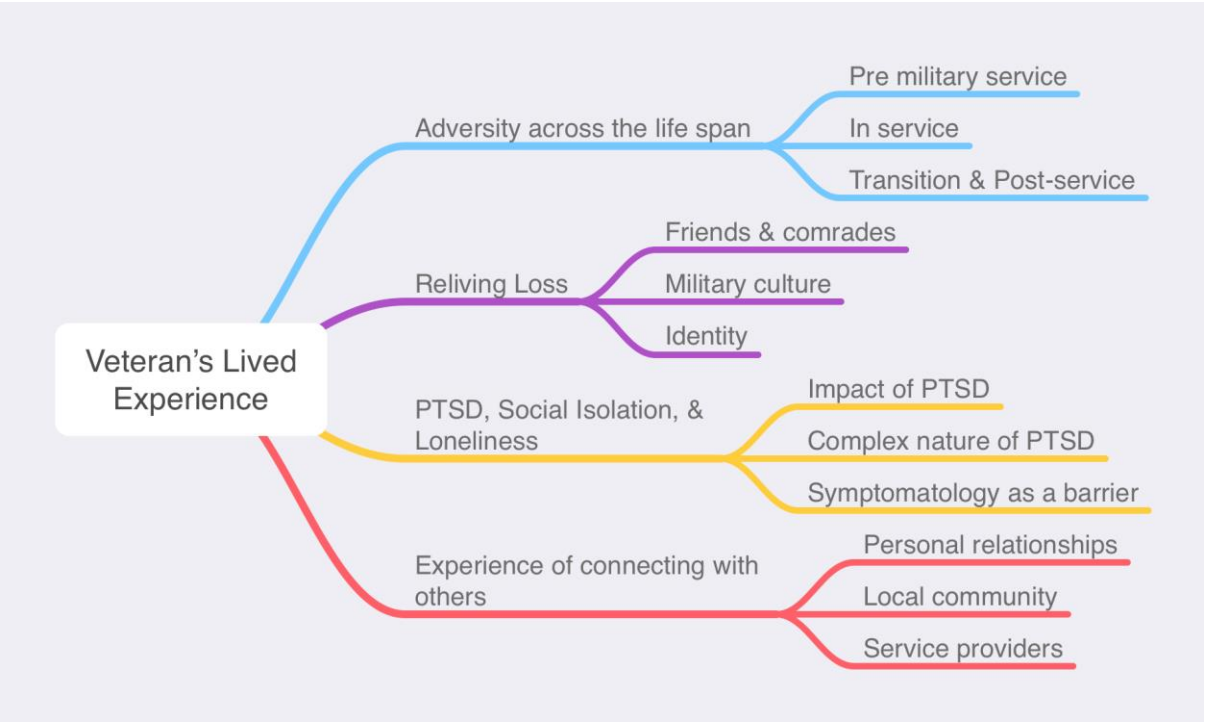


Figure 7: Primary & Secondary themes

The final stage of Framework analysis is abstraction and interpretation. At this stage the main findings will highlight critical narratives to give life to the primary and secondary themes.

Theme 1: Adversity within the Life Span

This overarching life event reflects a clear starting place within the participants' narratives within this study. For many participants, the story of adversity started in childhood and followed them into adulthood. It was evident that for some participants, a deterioration in mental health was not just experienced on entering civilian life but was present whilst they were still serving. For many participants, childhood adversity was compounded by military service adversity, which consequently impacted their transition from the military, impacting their integration into civilian communities.

Pre-Military Service

The participants discussed childhood issues that adversely affected them, including dysfunctional family systems, the loss of family members, family structure, living in an environment of domestic abuse and physical, emotional, and sexual

abuse. For many of the participants, childhood trauma was the foundation of their current presentation:

> ***"After my mum killed herself, my dad moved out within a week of the funeral, so I was living at this house that… I was abused in".***

> ***"I got fostered out twice, the first one didn't work which is when I got moved to a different home".***

> ***"Because I don't know how a family unit works from my childhood I'm thrown into that big washing machine of loneliness, self-isolation, anxiety, depression…. And there's no way out of it".***

During Military Service

It was clear from the narratives that some participants described their initial service within the military as the foundation of stabilising their life. However, this stabilisation came at a cost, and several descriptions within the narratives highlight elements of military service being a catalyst to or reawakening their PTSD due to the nature of their role and their exposure to military combat:

> ***"If you saw a child laying there and they were deliberately booby trapped, you know, you just had to walk. And that's a hard thing to do, you know!".***

> ***"I obviously got injured, lost two of my friends, [the bullet] went through his head and went through from there. My other mate, just under the chest plate, ricochet through there, went onto the ground and then went straight into my side here".***

> ***"We came back, and it wasn't a particularly good tour, you know, we lost a few guys over there".***

It is clear from the above extracts that the participants were exposed to many traumatic events during their military service. It is this trauma, coupled with childhood trauma and adversity, which has seen an impact on their transition.

Transition

All participants spoke about how the transition had not initially affected them. However, over time, it had a detrimental effect on their emotional health and well-being due to poor adjustment to their new environment and how they became isolated and lonely.

> ***"When I first come out, I was still happy, and it must have taken about three or four months, if that, and then I just went downhill, literally".***

> ***"It's a hard adjustment coming out because suddenly you're on your own… a time of my life that will never come back… I felt that sense of loss… I grieved for a time that it's gone".***

> ***"The loneliness starts when you walk out of that front gate".***

For some of the participants the lack of validation of service was also seen as a pertinent component of feeling angry, worthless, and asking themselves what was the point.

> ***"The moment you leave, it's almost like someone with a chopping block, you're gone, you don't exist. The moment you sign off that dotted line, you're gone, you're on your own, you're lonely".***

> ***"When I left, I was angry, there was no thanks very much… nothing".***

Theme 1 Summary

The elements within this life event describe and discuss essential observations concerning understanding adversity across the life span of a veteran with PTSD and the effects trauma has on transition, positive engagement, and re-connecting.

These elements within the life event highlight childhood adversity being a factor within the life of the veteran participants, which had been suppressed and then re-woken by exposure to military-related adversity and trauma. Furthermore, it is clear from the narratives that the temporal journey of adversity over a life course has a detrimental effect on transition and reintegration into the civilian community. For example, following several adverse experiences, participants leave the military and, due to their historical

experiences, are initially well and happy; however, due to the lack of structure, routine, and purpose is seeing a detrimental effect on their emotional health and well-being and feelings of being lost.

Theme 2: Reliving Loss

The elements within this life event describe and discuss essential observations concerning understanding adversity across the life course of a veteran with PTSD and the effects trauma has on transition, positive engagement, and re-connecting.

These elements within the life event highlight childhood adversity being a factor within the life of the veteran participants, which had been suppressed and then re-woken by exposure to military-related adversity and trauma. Furthermore, it is clear from the narratives that the temporal journey of adversity over a life course has a detrimental effect on transition and reintegration into the civilian community. For example, following several adverse experiences, participants leave the military and, due to their historical experiences, are initially well and happy; however, due to the lack of structure, routine, and purpose is seeing a detrimental effect on their emotional health and well-being and feelings of being lost.

The Military

Participants described the loss of military structure and routines which enabled them to function effectively, and described the loss of this structure as a leading factor to being on their own as they no longer felt part of the military structure or the community:

> ***"That was instilled into me, day one, week one training. You're the best, you're better than everybody else, you know, civvies, you know, and that never stops, it doesn't stop, you've already been programmed to be that way, to be socially isolated and lost".***

> ***"Everything around me, my whole structure, just seems to have fallen away and I'm lost".***

> ***"It's a hard adjustment coming back out because suddenly you're on your own".***

Friendships and Relationships

A growing concept within the narratives of the participants highlighted that not only did they lose the structure of the military environment, but they also lost touch with friends or colleagues which increased feelings of loneliness:

> ***"Just me without anything, without anybody, any help, any friends, anything. Without anything at all, that's loneliness for me".***

> ***"Not feeling connected to other people is how I would say it affects me. I don't really feel connected to the military community anymore".***

> ***"I was on my own for two years, because it was just easier being on my own. I locked myself away, didn't want to be near anybody".***

> ***"You have friends who are veterans and then you won't speak about it, it's nice to know that they're there but sometimes it brings stuff up that you don't want to hear. I need them but I daren't have them".***

Many of the participants also described their fear of not being in relationships because of their PTSD impacting negatively on their relationship. This led some participants choosing between intimacy and PTSD:

> ***"I've been in and out of relationships but then it was easier on your own sometimes, so you didn't have to worry about saying the wrong thing, doing the wrong thing, easier being on your own".***

> ***"You just want to be on your own at the end of the day, nobody wants that do they if you're in a relationship".***

> ***"I tend to avoid getting close to anybody, because I feel like I am frightened of loss".***

Identity

There was a clear discourse within the participants' narratives of a loss of self during the transition from the military, which was compounded by the loss of structure, routine, and friendships. As a result, identity formed the foundation of who that participant was

pre, during and after military service. It became a changing concept due to PTSD, increasing social isolation and feelings of loneliness.

> ***"I had lost myself somewhere and I just couldn't find me… it's like I've lost someone, lost a part of me. And I don't know how to heal that wound".***

> ***"It just started unravelling I felt apart, I really did, I fragmented. So basically, there were parts of me that were still left out in Afghanistan, and I used to say it to people, I used to say, you know, I died out there".***

> ***"I used to enjoy running, going out, doing stuff like walking the dog, things like that, but then that just stops, stop doing everything. As I say, I used to lock myself away in my room".***

Theme 2 Summary

There was a clear discourse within the participants' narratives of a loss of self during the transition from the military, which was compounded by the loss of structure, routine, and friendships. As a result, identity formed the foundation of who that participant was pre, during and after military service. It became a changing concept due to PTSD, increasing social isolation and feelings of loneliness.

Theme 3: PTSD, Social Isolation and Loneliness

The range of symptoms due to the presentation of PTSD across the participants highlights that whilst the collective group of participants have a diagnosis of PTSD, the presenting symptoms are different for each individual participant, and is based on the context of their lives.

The complex nature of PTSD Symptomology as a barrier

Many of the participants highlighted that PTSD was impacting on their activities of daily living and having a profound effect on their overall health and well-being:

> ***"Panic attacks are still a thing… nightmares are still a thing… I still get flashbacks… I'm aware of my avoidance behaviours… anxious, irritable…***

anxiety is a big thing for me… it's like an anchor around my feet… wherever I go, whatever I do, PTSD comes with me… it's a badge I don't want".

"All because my loneliness, it does stem from my PTSD, it's your mind is so kerfuffled, you don't really know how to think, and your mind plays tricks on you and loneliness is just a trick of the mind".

For some participants the effect of PTSD became debilitating and increased social isolation:

"If you get triggered majorly you shut yourself off, go to your bed, you curl up and that's it".

"A lot of the social isolation we bring on ourselves through avoidance".

The Impact of PTSD

In several narratives, the participants described how PTSD affects their engagement ability. For example, many participants felt they were passed from service to service, which became detrimental to their health and well-being and, for many was the catalyst to withdrawing from community service provision and increased their social isolation:

"I got passed from pillar to post and if you are going to get help you need to be able to build up a relationship, you can't build up a relationship if you are just going from one person to another and just being asked the same set of questions again and again and again".

It was not only service providers which were being push away by the participants due to the symptomology and presentation of their PTSD, but the participants explained that they also pushed family members away, to protect them from both the presentation of PTSD and the veteran themselves:

"You've pushed yourself into a lonely position by pushing everybody away that you love… I push them away because I don't want to hurt them".

Theme 3 Summary

Within this life event, the elements indicate that PTSD for many participants significantly increased their social isolation and amplified loneliness. In addition, the number of challenges which were identified throughout the elements of this live event impacted access to service provision and support, which in turn increased the symptomology of PTSD, resulting in their overall poor mental health becoming detrimental to their overall health and well-being and facilitated in the withdrawal of the participants from their family, friends, and their community services.

Theme 4: Connecting with others

During the interview stage, all the participants shared self-exploration narratives regarding their PTSD journey. Through self-reflection, many participants identified that being connected to themselves, their families, their community, and service providers effectively subdued the symptomology of PTSD and created a better engaging self.

Personal Relationships

Living with PTSD for many participants caused a general retraction of a person, a withdrawal into oneself, which resulted in becoming significantly less loving, tactile, and expressive with their family members. However, when reflecting on their lived experience of PTSD, there was the realisation that being connected and engaging with family members was the catalyst to reducing social isolation and loneliness and, importantly, gave many participants the validation that they were loved.

> ***"The man she married, the man she met, he has gone. She could quite easily just say no, I am out of this, I am not having it, but she didn't, and she learnt to love the new me"***

> ***"I had my breakdown, I put her through so much, but she stayed there… she still wanted to love me, she still wanted to help me".***

> ***"Sometimes all I need is just to see or hear either one of my children or one of my grandchildren and that's like a reset button".***

The above extracts highlight that family members are vital in reducing social isolation and loneliness within the veteran population. However, it was also reflected through the narratives of the participants that there is also a need for family members to access support services specifically for them and their needs:

> ***"The only one that is with us 100% all the time is our partners, whether that is a wife or a husband or whatever, and not enough is given for them and not enough help out there for them either".***

> ***"The families understand and it's heart breaking to watch a family member break down because they don't know where to turn to".***

Local Community

Participants described this element as being an important aspect of their self-discovery which improved their mental health and well-being. However, the participants described feelings of apprehension and anxiety of connecting to their local community for fear of being judged:

> ***"There is a connection with the not wanting to be judged…".***

> ***"I just don't have… the skills or the confidence to just talk and be heard".***

However, many of the participants who have worked through the feelings of apprehension to engage with their community assets share the benefits of connecting to activities within their local community:

> ***"I tend to take a lot of my issues out at the gym".***

> ***"I channelled all my anger into sport".***

> ***"I felt better after my long run… When you've had the run, you get them endorphins".***

Importantly for several of the participants having local veteran specific groups helped with the wrap around support they needed at specific times to reduce the feeling of being lonely:

"I am feeling lonely, next thing you know you've got 20-30 guys, give me a ring, do this, do that, come and meet me, we will go for a coffee, which is good".

Service Providers

There is significant discourse relating to veterans help-seeking and engagement with civilian service provision due to a lack of understanding, stigma, and anxiety. However, within this element, there is a unique insight into the lived experience of participants positively engaging with civilian servicers to reduce the presenting symptoms of PTSD, and thus improve social connectedness and potentially reduce loneliness:

"One day went to the doctors and that was it. Yeah, he had a look at everything and tests and talked to Combat Stress, so yeah, that's where I started".

"You are made to feel welcome; you are made to feel as though you are wanted, you are worth something, you are not worthless, you are not devalued".

One participant described their treatment as being positive experience to talk to people:

"Something called EMDR… I did that and luckily it did what it needed to do… It helped me process and helped me talk to people a lot more and realise locking yourself away is not the best thing to do".

Theme 4 Summary

The life event, connecting to others, is a significant part of this piece of work. The elements in this life event demonstrate that self-awareness and building trust is critical to reducing social isolation and loneliness. In addition, through connecting with the self, the participants have noted they had to understand their symptoms, its effects and the broader effects of PTSD when connecting to others.

When discussing connecting to the family, a significant other is also carrying the effects of PTSD. Moreover, the participants in this study highlight that family members play an essential part in their lives if they allow them in. Notably, the participants in this study have indicated that those who provide support for them also require external support, which needs to be specific to their individual needs.

Within the element of connecting to the local community, there is an emphasis on engaging in sporting activities, whether as an individual or a team. It is this positive engagement that has enabled the creation of new experiences and the development of a new network for some participants. Importantly for some, they could access a friendly community, which was made up of military-connected people, those with military experience.

Finally, the narratives around engaging with service providers offer an insight into the lived experience of reaching out to a civilian organisation. The participants acknowledged there was trepidation of the unknown due to personal anxiety and fear of being stigmatised. However, the participants shared that they had a positive experience with non-judgemental civilian agencies who actively listened to and validated their experiences.

Phase 3: Co-Production

Phase Three: Co-Production Event

The aim of the on-line co-production event was to bring together multiple stakeholders to understand the lived experience of social isolation and loneliness from the perspectives of the veteran participants and the agencies which support them.

Participants

Fifty-eight delegates attended the online co-production event. The delegates provided multiple viewpoints on social isolation and loneliness from a lived experience perspective, i.e., from the veteran or family, service provider perspective, i.e., MoD, OVA, statutory, third sector and voluntary sector and an academic perspective, i.e., researchers from several universities.

Delegates were assigned to breakout rooms, with each room facilitated by a member of staff from the Northern Hub for Veterans and Families Research, who recorded and took field notes. Each virtual room had 6-8 delegates, each with representation from multiple stakeholders. From the perspective of the veteran participants, an iterative process was used to create the following questions to enable the right questions to be asked.

Table 3: Co-Production Table Exercises

TABLE EXERCISE ONE
Overview Based on the data collected from the participant interviews, the theme of therapeutic intervention, what is your organisation currently doing to reduce social isolation and loneliness within the PTSD diagnosed veteran community? - What are the barriers in reducing social isolation and loneliness within your service provision? - How do you know your service provision is effective?
TABLE EXERCISE TWO
Considering theme 3 social interaction, how does your service support veterans to identify, access and connect to the civilian community? - What skills do service providers need to facilitate connection? - What training/education is needed to facilitate connectivity between veterans and the civilian population?

At the end of the table exercise the facilitators collated the notes to provide general themes for further discussion. These themes were shared to the wider group in a general room with all delegates and each rooms findings were shared by the facilitator.

Analysis

The Co-production recorded data was thematically analysed by the projects research assistant. The process of data analysis followed the previous methods of thematic analysis. This section of data is presented as conceptual collective themes.

Table Exercise 1:

In the first table exercise, delegates were asked how their organisation reduced social isolation and loneliness. Many of the delegates highlighted that their service provided personalised care and support for the veteran and, in many cases, their families, which was holistic for many service providers, enabling appropriate sourcing of meaningful activities. Moreover, service providers and veterans with lived experience of loneliness and social isolation highlighted that peer-led services helped to reduce inactivity and placement dropout and improve social connectedness with the support of a multiagency approach to care provision.

When discussing what the barriers were to reducing social isolation and loneliness within service providers, many of the delegates highlighted the need for long-term funding for appropriate service providers to support not just the short and medium needs of veterans with PTSD who are at risk of social isolation and loneliness but also to map the long-term support which was needed. The funding point was also supported by geographical awareness, which was regarding accessibility. The veterans within the co-production event highlighted that many were socially isolated due to living in rural areas where services did not always reach. This led to the delegates highlighting a lack of community knowledge. A lack of community knowledge was described as not knowing the service provisions within the locality to enable signposting to the right agency.

When discussing how services measured effectiveness, most delegates explained that they use veteran and family feedback to validate their service. Moreover, many of the delegates highlighted they had adopted a peer-led service based on feedback from veterans and families, which is constantly reviewed using appropriate service-led outcome measures.

Exercise 1 findings:

Question: *What is your organisation currently doing to reduce social isolation and loneliness within the PTSD diagnosed veteran community?*
○ Provide Personalised Care ○ Provide Peer led Service ○ Use Holistic and Appropriate Interventions ○ Use a multi-agency approach
Question: *What are the barriers in reducing social isolation and loneliness within your service provision?*
○ Provision of long-term funding ○ Being geographical aware ○ Lack of community knowledge
Question: *How do you know your service provision is effective?*
○ Using user and family feedback ○ Using appropriate outcome measures ○ Co-producing services

Table Exercise 2:

In the second table exercise, the delegates were asked how their service support veterans understand, access, and connect to the civilian population. Many of the service providers explained that they had an open forum for discussion and would actively listen to veterans and their families whilst meeting expectations with openness and honesty. There was a consensus of service providers validating what was being shared with the veteran and family members to support social connection and integration with the civilian population.

The delegates were then asked what skill set employees need to support veterans and their families in integrating with their local civilian community to reduce social isolation and loneliness. Many delegates explained that staff must be empathetic, compassionate

and have good soft skills to develop a therapeutic relationship built on shared values and expectations. Importantly, those with a lived experience of social isolation and loneliness explained that they need time to connect, build trust, and engage. Therefore, the staff needed to be able not to be time pressured in meeting the needs of the veterans and their families.

Exercise 2 findings:

Question: *How does your service support veterans to understand, access and connect to the civilian community?*
○ Conduct active listening ○ Being open and transparent ○ Validate the voice of the veteran and their family ○ Provide awareness of veteran issues.
Question: *What skills do service providers need to facilitate connection?*
○ Empathetic and compassionate ○ To develop a therapeutic relationship ○ Have good soft skills ○ Have time
Question: *What training/education is needed to facilitate connectivity between veterans and the civilian population?*
○ Mental First Aid Training ○ Mentor/peer training ○ Military Awareness training ○ Knowledge on community service provision

Summary

The above extracts highlight several interventions that work well and enable organic growth of service provision and ongoing support for veterans and their families. Moreover, the co-production event highlighted areas for improvement and how to facilitate improvement by looking at certain aspects of their service delivery and its impact on their staff, veterans, families, and the wider community.

Evidence Underlying the need for a Common Assessment Framework

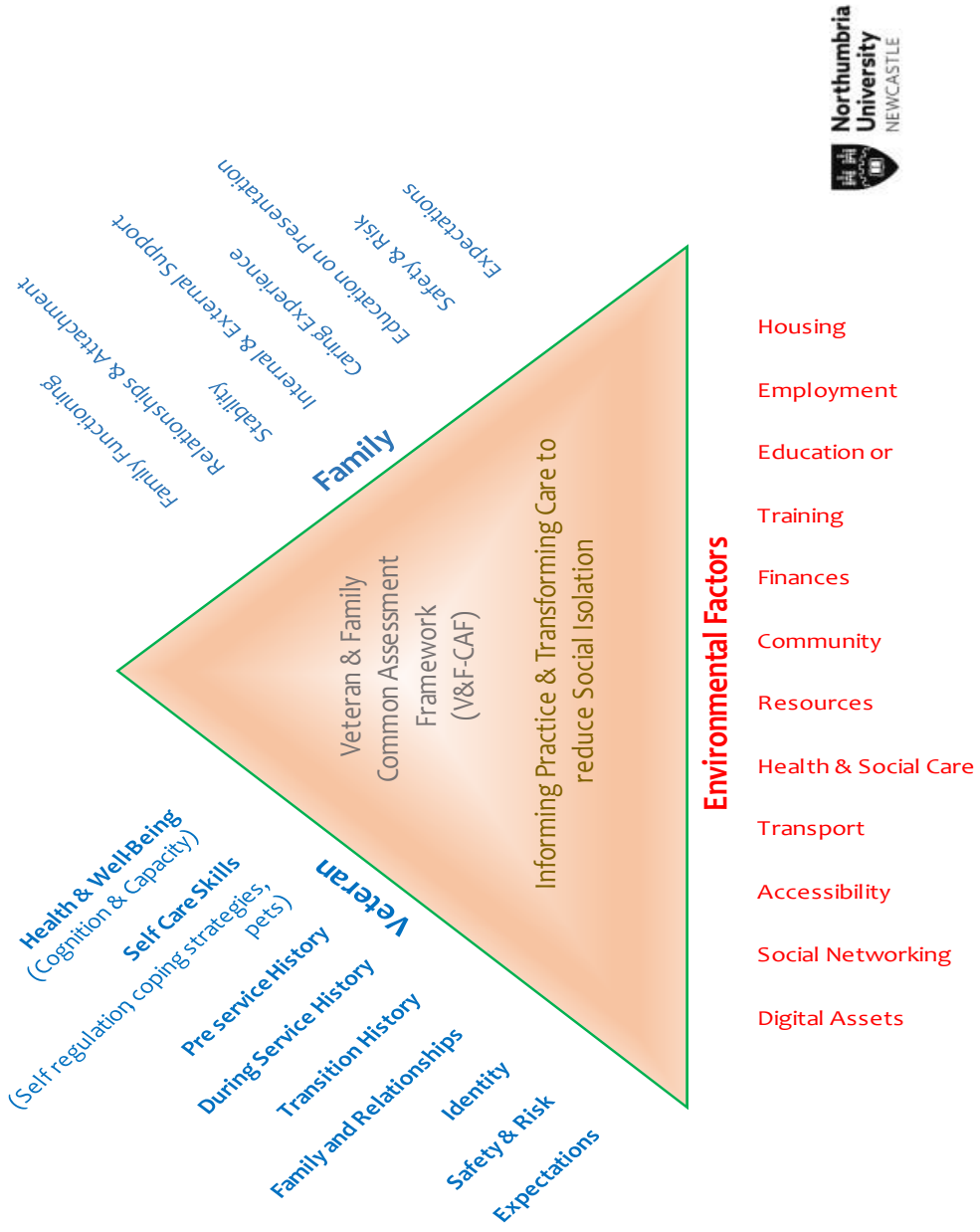
The Common Assessment Framework (CAF) developed by the Department of Health (2000) was developed to assess the holistic needs of children in need or at risk, which assessed three domains, including parenting capacity, family and environment and the child's development. Each of these domains has elements which are designed to guide practitioner's questioning and enquiry when working with children, young people and their families/carers. The CAF has been used in over 15 countries. It has been demonstrated to enhance professional assessment skills when working in complex situations and has been used to aid early identification of needs, resulting in more comprehensive assessments to provide appropriate and specific interventions (Statham, 2011). Importantly, the CAF has contributed to improving interprofessional working and communication across disciplines whilst also improving person and family-centred participation. Furthermore, the CAF has contributed to the improved outcomes of children and young people's emotional health and well-being, and their families, whilst improving better relationships between children and their parents.

A Veteran and Families Common Assessment Framework (V&F-CAF)

The Veteran and Family Common Assessment Framework (V&F-CAF) (figure 8) aims to offer guidance and support to all agencies (statutory, voluntary and third sector) working with veterans and their families to reduce social isolation and loneliness. This document is constructed to reflect the different needs of those working with veterans and their families and acknowledges that those who work with veterans and their families will use this differently depending on their level of experience and knowledge; their agency approach, including policies and procedures; and the complexity of the assessment being undertaken. However, the aim of this V&F-CAF is to provide those working with veterans and their families to use a common approach to identifying, connecting, and engaging veterans and their families commonly and systematically.

The V&F-CAF aims to bring a consistent, methodological, and robust approach to assessing the areas of poor social and community isolation. The V&F-CAF sets out to be

Figure 8: The Veteran and Family – Common Assessment Framework (V&F-CAF)



usable by offering systematic guidance and processes which, when used, will assist those working with veterans and their families at all levels, in all agencies to approach the assessment of social isolation with increased confidence and competence whilst enhancing interventions and potential outcomes for veterans and their families. Figure 8 shows the direction of questions which are needed to be asked by the agency regarding the veteran, their family, and their connection to their local community.

Summary

In summary, the V&F-CAF should be used by all agencies as a standard and accessible tool to capture pertinent information based on the findings of this project and the multiple projects regarding veteran social isolation and loneliness which preceded it. Furthermore, the V&F-CAF aims to ensure that veterans and their families experience a seamless and coordinated service from all agencies so that assessment work builds on the same principles across all military-connected stakeholders, be that statutory, third sector or the voluntary sector. Moreover, the V&F-CAF aims to put the veteran and their family at the centre of the intervention process to enable a co-produced approach to early identification, connection and engagement, making sure that services provide the right help at the right time, based on the good understanding of the need and provide a multi-agency approach to care provision and support those who need a wraparound service based on the identified need.

Discussion

Using a mixed-methods, iterative approach across the three phases of the project aimed to gain a deeper insight into the lived experience of veterans with a clinical diagnosis of PTSD and their issues which have led to social isolation and loneliness. In phase one, screening tools were used to measure both social isolation and loneliness which provided insight into the level of social isolation and loneliness the participants felt. Phase two provides the narratives behind the qualitative data using a semi-structured approach and explores the participants' stories over a life course. Moreover, these told stories focused on adversities across childhood and early adulthood, the transition from the military, social isolation, and feelings of loneliness. Importantly, it was the told stories which provided rich narrated data to understand the unmet needs of this population and their families. Finally,

phase three provided a co-produced platform for veterans and stakeholders from the statutory, third and voluntary services.

With regards to reducing social isolation and loneliness, it was clear that early identification and appropriate intervention are critical components of the findings that have highlighted the need to acknowledge the impact of adversity across the life course specific to some of the transitioning military community. Across the three phases, it is apparent that PTSD plays a significant role in veterans and their families being socially isolated and, for many feeling lonely. Additionally, fluctuating experiences of adversity within the participant's childhoods and into adulthood indicated moments of distress which identified specific moments where appropriate intervention would be vital in supporting the emotional health and mental health of the participants.

Connecting to the right service at the right time facilitates a 'No Wrong Door' policy (De Faria et al., 2021). It is clear from the findings of this study that being passed from pillar to post has a detrimental effect on the veteran's overall health and well-being and increases the risk of withdrawal, thus becoming socially isolated. The process of positively connecting to a vulnerable population has been well documented as being complex and, at times, challenging (Wilson et al., 2018, Stein and Tuval-Mashiach, 2015, McGill, 2022) and can have an impact not only on the veteran population but service provision. Therefore, service users, their families and service providers need to co-design and co-produce service provision which is fit for purpose and not only meets the needs of the broader military-connected PTSD population but encompasses their families and local communities.

A key factor in reducing social isolation and loneliness within the PTSD veteran population lies in connecting service users and their families to services and enabling positive engagement. The reflections of the participants within this study demonstrate that positively engaging in self-refection has enabled them to understand and identify who they are and re-engage with their families and friends. Furthermore, it is this positive engagement with the families and friends which has strengthened the ability of the participants to have the motivation to engage with their local communities. Importantly, building community capacity is not simply identifying gaps within service provision or signposting; it is collectively developing a whole socioeconomic system (Serfioti et al.,

2022) which enables veterans with PTSD and their families to succeed by positively engaging in dialogue, action, and evaluation.

This research has strengthened the evidence that suggests the reduction of social isolation and loneliness in the PTSD veteran population is achievable if agencies take the time to facilitate active listening and positive engagement (Rolfe, 2020). Therefore, consideration needs to be given to how access to service provision is achieved and what needs to be in place to support ease of access. It is evident from the findings of this study that when in service, veterans, and their families at times experience difficulties in accessing an appropriate holistic assessment which collates their specific needs, formulates a conclusion, and enables service providers to offer appropriate, timely and veteran and family specific intervention post PTSD diagnosis.

To conclude, the findings of this study highlight the importance to identify, connect and engage with veterans, their families, and their communities. During the analysis of this research, it became clear there was a lack of identification of both the veteran, their families and appropriate knowledge of community assets to support the family unit. Furthermore, connecting to veterans was at times complicated due to their withdrawal from society, their vulnerabilities, and the lack of knowledge from service providers of a vulnerable individual. This lack of connection limited appropriate and specific engagement. It is clear from the findings that a lack of appropriate and needs led engagement increased social isolation and loneliness within this cohort of veterans with PTSD. Therefore, it is evident from the findings of this study that the acronym ICE (Identify, Connect and Engage) (figure 9) should be used as standard procedure when supporting a veteran and family.

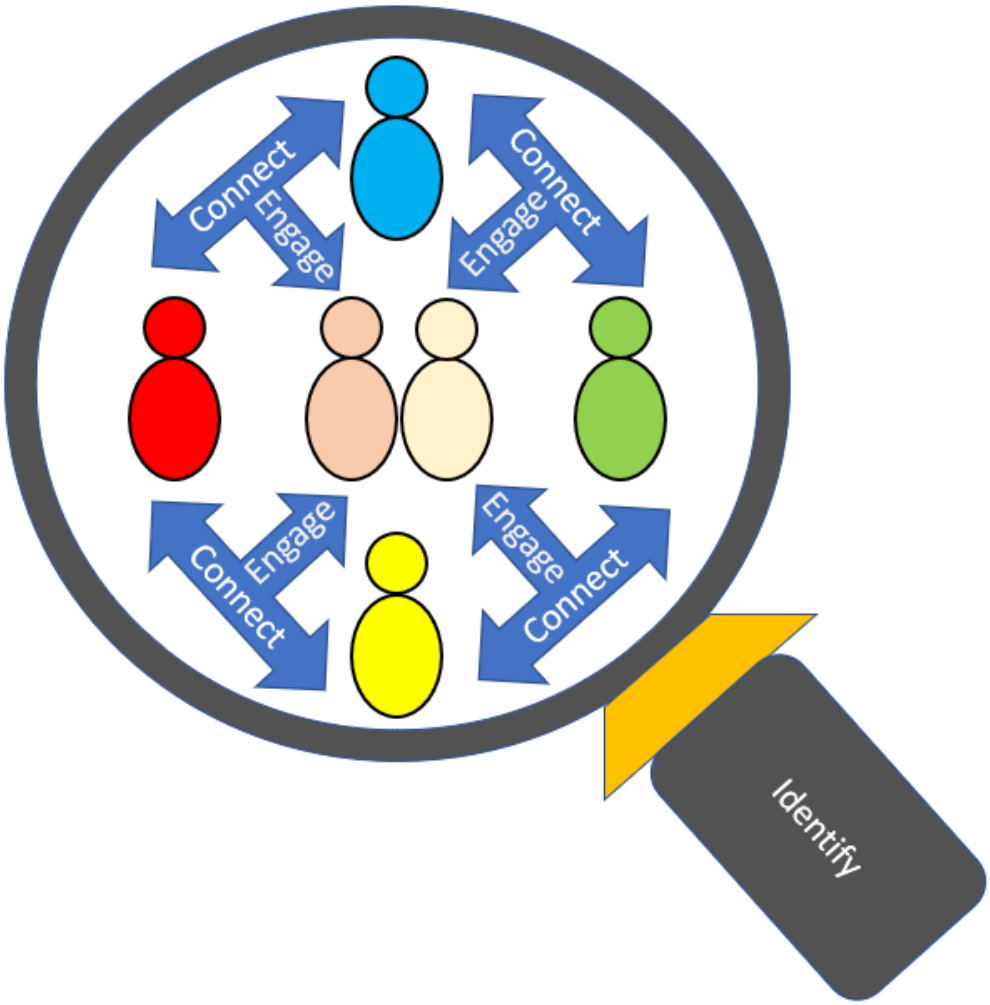


Figure 9: Identify – Connect – Engage (ICE) ®[3]

'Importantly, it is only when the veteran, and their families, are identified, connected, and are subsequently engaging, that the Veterans and Families Common Assessment Framework should be used as an appropriate intervention to complete a systemic family assessment, address social isolation and reduce loneliness'

[3] The Northern Hub for Veterans and Families Research at the University of Northumbria, Newcastle.

Limitations

It is essential to acknowledge that a limitation of this study is the predominantly male sample participating across all three phases of this study. This study could not have a more representative sample (e.g., Females), limiting the generalisability of the findings and recommendations. However, it is acknowledged that most service personnel are male, and it is unsurprising that the sample majority recruited from the Daparian Foundation were male. This research recognises the risk of gender bias towards male-orientated research into PTSD, social isolation, and loneliness limits some of the findings, and this needs to be considered with interpretation and the development of future research on those military-connected populations who experience social isolation and loneliness and the agencies who support them.

Recommendations

All recommendations are aimed at understanding the lived experience of veterans with PTSD who have experienced social isolation and loneliness and to identify unmet need; both from the perspective of the veteran, their families and agencies supporting the veteran population. The second aim was to develop and design a post clinical treatment intervention for PTSD diagnosed veterans who are experiencing social isolation and loneliness as well as informing potential future research and identify solutions.

- Phase two and three of this study indicated the need to improve collaboration between service users and their families and service providers. By using a 'lived experience' approach, the participants and delegates who took part in the co-production event felt it would be beneficial to continue working together to further develop the findings of this project, to maintain momentum and support the development of the post PTSD diagnosis intervention tool to reduce social isolation and loneliness within this population of veterans. Therefore, this study recommends that further consultation and collaboration to co-develop the V&F-CAF instruction manual for service providers to reduce the theory practice gap.

- For those who took part in Phase two and three of this study, it was felt education and training was a key priority in addressing the holistic needs of veterans with PTSD to address social isolation and loneliness. The findings of this study have enabled the development of the V&F-CAF, therefore there is a need to develop and implement education on the V&F-CAF, including how it was developed, who is it for and how to use it in practice. As a result of the co-production event, the participants and delegates felt that a hybrid approach to education was an appropriate method of education and training.

- Reality and rhetoric became a common discussion within both phase two and three of the project. Many of the participants indicated that they had been told that services were available and that they only had to ask or seek the service out for themselves. However, what became clear was that for those participants who experienced negative accessibility to service, the implementation and service procedures fell short of their needs. Therefore, the findings of this study would consider the implementation strategy of the V&F-CAF and use a co-development approach to service implementation. Importantly, as discussed within the co-production phase of this study a co-produce multi agency evaluation of the V&F-CAF is seen as best practice, as this approach facilitates a multi-lens in which to look at service implementation. Moreover, a co-developed method of service implementation enables co-produced service recommendations based upon both the lived experience of the veterans and their families, but also the strategic experience of the service providers.

Conclusion

To conclude, the findings from this project have provided an understanding of the lived experience of veterans with PTSD and the impact social isolation and loneliness have on their activities of daily living. Moreover, the findings have demonstrated the need for veteran's post PTSD diagnosis interventions to be enhanced to support their specific needs and support the reduction of social isolation and loneliness. Notably, he findings from this study provide the structure and substance of questions to be considered by statutory, third sector and voluntary agencies. It is clear from these findings that there is some good practice being carried out within veteran-connected service provision, but there is room for improvement and expansion. Moreover, the findings from this project showcase a need for a joint assessment which crosses all veterans' agencies to reduce duplication of information gathering, veterans repeating their lived experience, and enables multiple agencies to collect and share the same information, in the hope of promoting positive outcomes for veterans, their families and service providers alike.

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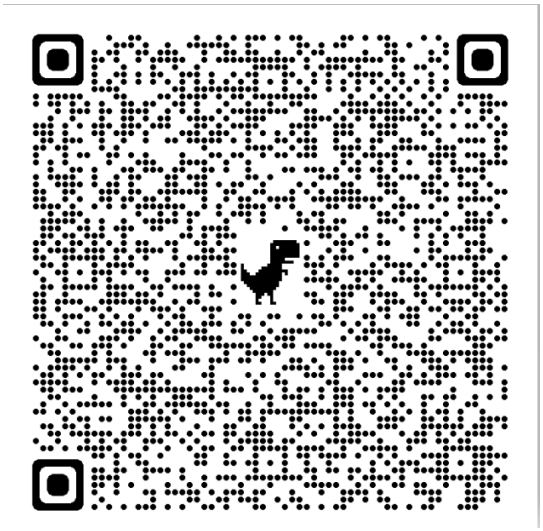
Appendices

Appendix 1: Systematic Narrative Literature Review



Validated scales to be used during data collection

De Jong Gierveld 6 Item Loneliness Scale (2006)

This section includes two scales which look at social relationships.
When answering the following questions, it is best to think of your life as it generally is now.

	Yes	More or Less	No
I experience a general sense of emptiness	☐	☐	☐
I miss having people around me	☐	☐	☐
I often feel rejected	☐	☐	☐
There are plenty of people I can rely on when I have problems	☐	☐	☐
There are many people I can trust completely	☐	☐	☐
There are enough people I feel close to	☐	☐	☐

Lubben Social Network Scale (2006)

Consider the people to whom you are related by birth, marriage, adoption etc….

	None	One	Two	Three or Four	Five to Eight	Nine or more
How many relatives do you see or hear from at least once a month?	☐	☐	☐	☐	☐	☐
How many of these do you communicate with using technology?	☐	☐	☐	☐	☐	☐
How many relatives do you feel at ease with that you can talk about private matters?	☐	☐	☐	☐	☐	☐
How many relatives do you feel close to such that you could call on them for help?	☐	☐	☐	☐	☐	☐

Consider all of your friends, including those who live in your neighbourhood ….

	None	One	Two	Three or Four	Five to Eight	Nine or more
How many friends do you see or hear from at least once a month?	☐	☐	☐	☐	☐	☐
How many of these do you communicate with using technology?	☐	☐	☐	☐	☐	☐
How many friends do you feel at ease with that you can talk about private matters?	☐	☐	☐	☐	☐	☐
How many friends do you feel close to such that you could call on them for help?	☐	☐	☐	☐	☐	☐

International Trauma Questionnaire

Instructions: Please identify the experience that troubles you most and answer the questions in relation to this experience.

Brief description of the experience

_____

When did the experience occur? (circle one)

a. less than 6 months ago
b. 6 to 12 months ago
c. 1 to 5 years ago
d. 5 to 10 years ago
e. 10 to 20 years ago
f. more than 20 years ago

Below are a number of problems that people sometimes report in response to traumatic or stressful life events. Please read each item carefully, then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely

P1. Having upsetting dreams that replay part of the experience or are clearly related to the experience?	0	1	2	3	4
P2. Having powerful images or memories that sometimes come into your mind in which you feel the experience is happening again in the here and now?	0	1	2	3	4
P3. Avoiding internal reminders of the experience (for example, thoughts, feelings, or physical sensations)?	0	1	2	3	4
P4. Avoiding external reminders of the experience (for example, people, places, conversations, objects, activities, or situations)?	0	1	2	3	4
P5. Being “super-alert”, watchful, or on guard?	0	1	2	3	4
P6. Feeling jumpy or easily startled?	0	1	2	3	4

In the past month have the above problems:

P7. Affected your relationships or social life?	0	1	2	3	4
P8. Affected your work or ability to work?	0	1	2	3	4

P9. Affected any other important part of your life such as parenting, or school or college work, or other important activities?	0	1	2	3	4

How true is this of you?

C1. When I am upset, it takes me a long time to calm down.	0	1	2	3	4
C2. I feel numb or emotionally shut down.	0	1	2	3	4
C3. I feel like a failure.	0	1	2	3	4
C4. I feel worthless.	0	1	2	3	4
C5. I feel distant or cut off from people.	0	1	2	3	4
C6. I find it hard to stay emotionally close to people.	0	1	2	3	4

In the past month, have the above problems in emotions, in beliefs about yourself and in relationships:

C7. Created concern or distress about your relationships or social life?	0	1	2	3	4
C8. Affected your work or ability to work?	0	1	2	3	4
C9. Affected any other important parts of your life such as parenting, or school or college work, or other important activities?	0	1	2	3	4

Adverse Childhood Experience (ACE) Questionnaire.

While you were growing up, during your first 18 years of life:

Item	YES	NO
1. Did a parent or other adult in the household often … Swear at you, insult you, put you down, or humiliate you? **or** Act in a way that made you afraid that you might be physically hurt?		
2. Did a parent or other adult in the household often … Push, grab, slap, or throw something at you? **or** Ever hit you so hard that you had marks or were injured?		
3. Did an adult or person at least 5 years older than you ever… Touch or fondle you or have you touch their body in a sexual way? **or** Try to or actually have oral, anal, or vaginal sex with you?		
4. Did you often feel that … No one in your family loved you or thought you were important or special? **or** Your family didn't look out for each other, feel close to each other, or support each other?		
5. Did you often feel that … You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? **or** Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?		
6. Were your parents ever separated or divorced?		
7. Was your mother or stepmother: Often pushed, grabbed, slapped, or had something thrown at her? or Sometimes or often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?		
8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?		
9. Was a household member depressed or mentally ill or did a household member attempt suicide?		
10. Did a household member go to prison?		
Number of YES's = TOTAL ACE Score		

Benevolent Childhood Experiences.

To get a BCE score, the survey-taker is asked how many of these ten items he or she experienced before the age of 18. Would you respond "yes" or "no" to the prompt, ***"Growing up, I had..."***

Item	YES	NO
1. At least one caregiver with whom you felt safe?		
2. At least one good friend		
3. Beliefs that gave you comfort		
4. Enjoyment at school		
5. At least one teacher that cared		
6. Good neighbours		
7. An adult (not a parent/ caregiver or the person from *1) who could provide you with support or advice		
8. Opportunities to have a good time		
9. Like yourself or feel comfortable with yourself		
10. Predictable home routine, like regular meals and a regular bedtime		
Total YES's = BCE Score		

General Anxiety Disorder-7 scale.

GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems? *(Use "✔" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Patient Health Questionnaire-9 questionnaire.

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____ **DATE:** _____

Over the *last 2 weeks*, how often have you been bothered by any of the following problems? *(use "✓" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3
		add columns:	+	+
(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card.)		**TOTAL:**		

10. If you checked off *any* problems, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?	**Not difficult at all** _____ **Somewhat difficult** _____ **Very difficult** _____ **Extremely difficult** _____

Impact of Events Scale-Revised.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it	0	1	2	3	4
2. I had trouble staying asleep	0	1	2	3	4
3. Other things kept making me think about it.	0	1	2	3	4
4. I felt irritable and angry	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
6. I thought about it when I didn't mean to	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8. I stayed away from reminders of it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	2	3	4
13. My feelings about it were kind of numb.	0	1	2	3	4
14. I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it.	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
18. I had trouble concentrating.	0	1	2	3	4
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on-guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

Appendix 3: Patient Information

Participant Information Sheet

Developing a holistic intervention to reduce loneliness for veterans who have been treated for PTSD

Why have I been invited to take part in this study?
You have been invited to be part of this study because of your personal experience of loneliness within PTSD. This study aims to explore loneliness among the UK Armed Forces, PTSD diagnosed veteran community, and the impact of this on the sufferer and his / her family.
Before deciding if you would like to be involved in this project it is important that you understand why it is taking place and what it would mean for you. Please take the time to read this information.
If you have any questions you are encouraged to speak to a member of the research team (contact details at the end of this document).

What is the purpose of this study?
The aim of this study is to understand and ascertain the impact that loneliness has veterans on diagnosed with PTSD/complex PTSD to develop a conceptual framework for a holistic PTSD intervention to reduce loneliness. Specifically, it will focus on how gaining an understanding of all the circumstances leading up to the loneliness developing, and the impact of this.

Who is carrying out this study?
Researchers at Northumbria University are carrying out this study, alongside the Daparian Foundation, who have worked with the research team in every aspect of the research design. The Daparian Foundation will offer support while the research is taking place for each volunteer taking part. This study is funded by the Armed Forces Covenant Fund Trust.

Why have I been invited to participate?
You have been invited to participate in this study as you are a PTSD diagnosed veteran who is believed to have experienced / is still experiencing loneliness within your PTSD symptoms. We would value your perspective and experiences in developing this holistic PTSD intervention to reduce loneliness.

Do I have to take part?
No. It is up to you whether you wish to take part in the study. This information sheet will help inform that decision, and you are encouraged to discuss participation with others. If you choose to participate, you can choose to withdraw from the study at any point, without disclosing why. Non-participation will not affect your involvement/relationship with the Daparian Foundation or Northern Hub for Military Veterans and Families Research in any way. Furthermore, if you decide to participate, you are then free to withdraw up to 7 days after you have participated in the interviews.

What will this mean for me if I choose to participate?
If you choose to participate, you will be asked to complete some self-report survey scales and then take part in an interview using video recording facilities (such as Zoom) or over the telephone. The interviews may take up to an hour and a half to complete. All interviews will be audio and/or video recorded using Zoom and/or a Dictaphone and will later be transcribed.

Will information collected in this study be kept confidential and anonymous?
All information collected in this study will be anonymous and unidentifiable. No individual information will be reported. Only the research team will have access to this documentation. All personal information will be kept secure and confidential.

What will happen to my results?
It is anticipated that the results of this study will inform the research evidence base. The findings will also be reported in a scientific journal or presented at a research conference. Once more, it is important to note that all information will be anonymous and unidentifiable.

How will my data be stored and how long will it be stored for?
Your consent form will be kept in locked storage within Northumbria University. All electronic data including the recordings from your interview, will be stored on a password protected computer. All data will be stored in accordance with NHS and University guidelines and GDPR. All documentation will be destroyed 3 years after project completion.

Who has reviewed this study?
This study has been approved by Northumbria University's Faculty of Health and Life Sciences ethics committee (reference: XXX).

Where can I receive further support?

Via self-referral

The Daparian Foundation	richard.gettings@thedaparianfoundation.co.uk	07508 695005
Sapper Support	info@sappersupport.com	0800 0407873
Phoenix Heroes	info@phoenixheroes.co.uk	01206 932488
PTSD Resolution	contact@ptsdresolution.org	0300 302 0551
Mind	info@mind.org.uk	0300 123 3393

Samaritans	jo@samaritans.org	116 123
Help A Squaddie	info@helpasquaddie.org.uk	0300 3651332
Icarus	hello@icarusonline.net	0333 987 5055

Via GP referral

Assist Trauma Care	admin@assisttraumacare.org.uk	01788 560800
BACP	bacp@bacp.co.uk	01455 883300
BABCP	babcp@babcp.com	0161 7974484
Traumatic Stress Service	bartholomew.tenerowicz@swlstg-tr.nhs.uk	0203 2282969

General veteran Mental Health information

Veterans' Gateway - link / app, which puts you in contact with services that are available to you.

Veteran Friendly GP Scheme – A database of Veteran friendly GP practices across the UK complying to an approved standard of service to veteran patients, accessed via www.rcgp.org.uk

Contact details for further study information:

Dr Matthew Kiernan	matt.kiernan@northumbria.ac.uk
Richard Gettings	richard.gettings@thedaparianfoundation.co.uk

You are also able to contact the departmental Ethics Committee lead, Dr Juliana Thompson (juliana2.thompson@northumbria.ac.uk) for further information.

If you have any concerns relating to the processing of personal data, you can contact the Information Commissioner's Office (https://ico.org.uk/) or contact Duncan James, Records and Information Manager, (dp.officer@northumbria.ac.uk).

Developing a holistic intervention to reduce loneliness in veterans who have been treated for PTSD

Consent form

*Please answer the following questions by **initialling** the response that applies*

	YES	NO
1. I have read the Information Sheet for this study and have had details of the study explained to me.	☐	☐
2. My questions about the study have been answered to my satisfaction and I understand that I may ask further questions at any point.	☐	☐
3. I understand that I am free to withdraw from the study within the time limits outlined in the Information Sheet, without giving a reason for my withdrawal or to decline to answer any particular questions in the study without any consequences to my future treatment by the researcher.	☐	☐
4. I agree to provide information to the researchers under the conditions of confidentiality set out in the Information Sheet.	☐	☐
5. I wish to participate in the study under the conditions set out in the Information Sheet.	☐	☐
6. I consent to the information collected for the purposes of this research study, once anonymised (so that I cannot be identified), to be used for any other research purposes.	☐	☐

Participant's Signature: _____ Date: _____

Participant's Name (Printed): _____

Researcher's Name (Printed): _____ Date: _____

Researcher's Signature: _____

Where can I receive further support?

Via self-referral

The Daparian Foundation	richard.gettings@thedaparianfoundation.co.uk	07508 695005
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Debrief sheet

Developing a holistic intervention to reduce loneliness in veterans who have been treated for PTSD

Thank you for participating in this research project. Your involvement has made a valuable contribution to this research.

Our study investigated the development of loneliness within UK veterans diagnosed with PTSD who had previously been medically treated for their symptoms, developing an in-depth knowledge of the evolution of this loneliness, its unique characteristics, how to identify it and how to design an effective, post-treatment, intervention.

If you wish to withdraw your data from the current study you can do so within the next 7 days by emailing me (see email below) with your unique participant code that you provided at the beginning of the study.

Should you feel the need, now or at any time in the future to discuss your PTSD then please do not hesitate to speak to a trusted friend, family member, loved-one, your GP or one of the organisations listed below.

Where can I receive further support?

Via self-referral;

Via self-referral

The Daparian Foundation	richard.gettings@thedaparianfoundation.co.uk	07508 695005
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Veteran Friendly GP Scheme – A database of Veteran friendly GP practices across the UK complying to an approved standard of service to veteran patients, accessed via www.rcgp.org.uk

Appendix 4: Interview Schedule

Prompts for semi-structured interview.

Each of the areas below provides prompts for the semi-structured interview. Further prompts will be based on answers to the scales which will have been carried out 1-2 weeks prior to the interviews.

1. Provide opportunity to ask any questions and explain nature of the interview.

2. Discuss any relevant/important information recorded within the scales.

3. Please tell me about your loneliness.

4. If you are able, please describe a time when you can remember when you didn't consider yourself lonely

5. Do certain circumstances make you feel lonely? What causes your loneliness?

6. Do you feel as though your loneliness is related to your PTSD? Do you feel it is experienced differently from those without a PTSD diagnosis?

7. Do you feel that anyone else understand your loneliness? Can you honestly share your loneliness with anyone else? Why them?

8. How does your loneliness make you feel around your friends and family? Do they know how you are feeling?

9. Please describe your experiences of NHS/Social Services/ Charities, etc with regards to your loneliness?

10. What improves your loneliness? What coping mechanisms do you have? How does it help?

Please describe any feedback you would provide to those NHS/Social Services/ Charities that were involved in helping your loneliness? How well do you think the support was handled?

11. Please describe your experiences of any 'crisis situations' that relate to loneliness, and how quickly they were responded to?

12. Have you shared your experiences of loneliness with other veterans? Tell me about this?

13. Thank participants and end recording.

Appendix 5: Tables & Figures

Tables.

Figures.