THE ARMED FORCES COVENANT FUND TRUST

ARMED FORCES COVENANT

Westminster Centre for Research in Veterans | University of Chester

Tackling Serious Stress in Veterans, their Families and Carers

Evaluation Report

CONTENTS

ABBREVIATIONS

ACEs	Adverse Childhood Experiences
AF	Armed Forces
AFC	Armed Forces Community
AFCFT	Armed Forces Covenant Fund Trust
ANOVA	Analysis of Variance
AUDIT	Alcohol Use Disorders Identification Test
CBT	Cognitive Behavioural Therapy
CMF	Common Assessment Framework
DSH	Deliberate Self-Harm
EMDR	Eye Movement Desensitisation and Reprocessing
EQ-5D	European Quality of Life Five Dimension
FamCAS	Family Continues Attitude Survey
GAD-7	Generalised Anxiety Disorder Assessment
GP	General Practitioner
ICD-10	International Classification of Diseases-10
ICER	Incremental cost-effectiveness ratios
LGBTQ	Lesbian, Gay, Bisexual, Transgender, Queer
MH	Mental Health
MOD	Ministry of Defence
MV IAPT	Military Veterans Improved Access to Psychological Therapies
NHS	National Health Service
NI	Northern Ireland
NICE	National Institute for Clinical Excellence
NIHR	National Institute for Health Research
OT	Operational Tours
PH	Physical Health
PHC	Primary Health Care
PHQ-9	Patient Health Questionnaire-9
PI	Principal Investigator

ABBREVIATIONS

PPI	Public and Participant Involvement
PTSD	Post-Traumatic Stress Disorder
QOL	Quality of Life
QUALY	Quality-adjusted Life Year
RAF	Royal Air Force
RBL	Royal British Legion
SRC	Solent Recovery College
SSF	Serious Stress Fund
TILS	Veterans' Mental Health Transition, Intervention and Liaison Service
UDR	Ulster Defence Regiment
UK	United Kingdom
UoC	University of Chester
VAS	Visual Analogue Scale
VHM CTS	Veterans' Mental Health Complex Treatment Service
WSAS	Work and Social Adjustment Scale
WBH	Wellbeing House
WEMWBS	Warwick-Edinburgh Mental Wellbeing Scale
WHO	World Health Organisation
WSPAI	Work Productivity and Activity Impairment
WWTW	Walking with The Wounded

FOREWORD

Anna Wright

Chief Executive Officer

Armed Forces Covenant Fund Trust

This report explores the impact of the £4.2M Tackling Serious Stress programme. This programme was designed to provide funding for innovative and new ways of working to reduce serious stress in veterans, their carers and families. We funded seven Single Lead Organisations who each managed a portfolio. The work within these portfolios supported veterans that were very unwell, their carers and families. 38 organisations were included within these portfolios, and they included a wide range of clinical and support services, ranging from addiction, counselling, housing and money advice, to relationships, peer mentorship and talking therapies for veterans, their carers and families.

Projects were supported where there was evidence to suggest the idea might produce better outcomes than current sources of support on offer, whilst addressing the possible barriers to accessing health and social care. The programme was designed to be collaborative and encourage organisations to work together when supporting veterans with complex needs. The University of Chester's Westminster Centre for Research in Veterans has completed this independent evaluation, including an economic cost benefits analysis of the TSS projects. This is the first time the Trust has commissioned specific cost benefit analysis within an external evaluation, and we are delighted by the insightful results which show that the projects delivered significant benefits for veterans while offering good value for money.

The mixture of different intervention options including psychotherapeutic, social prescribing and practical support produced significantly positive results. The evaluation has shown that veterans who took part in the projects funded by the programme were effective in reducing reported depression, anxiety, and alcohol misuse. Veterans also benefited from improved health and wellbeing. Through addressing complex needs, veterans and their families were supported back into employment and could make improvements to their lifestyles and quality of life, physical, mental health and wellbeing. Projects

FOREWARD

also helped veterans to better manage their ongoing health and social care needs and access the longer-term support that they might need.

Outcomes modelled using both healthcare and societal cost perspectives showed the programmes to be cost-effective when measured against established NICE thresholds. It is likely that if the approaches supported by the project were to continue, there is strong reason to believe these per-person costs would only diminish over time, and the programme would improve further in cost-effectiveness; which will be of interest to policy makers and commissioners of veteran support services.

The evaluation presents a very positive reflection of the TSS programme. The projects reached nearly 1000 veterans with complex mental needs and their families. Some of these veterans had not previously accessed services, and they reported high levels of satisfaction with the support that they received.

Connecting grant holders throughout the programme and sharing learning provided real-time data to indicate what was helping beneficiaries and to identify how challenges were being addressed. The University of Chester's Westminster Centre for Research in Veterans' analysis of the projects funded by the Trust offers significant learning opportunities and points to the TSS protocol providing a platform for lasting partnerships with governmental agencies, professional bodies, charities, businesses, and appropriate networks.

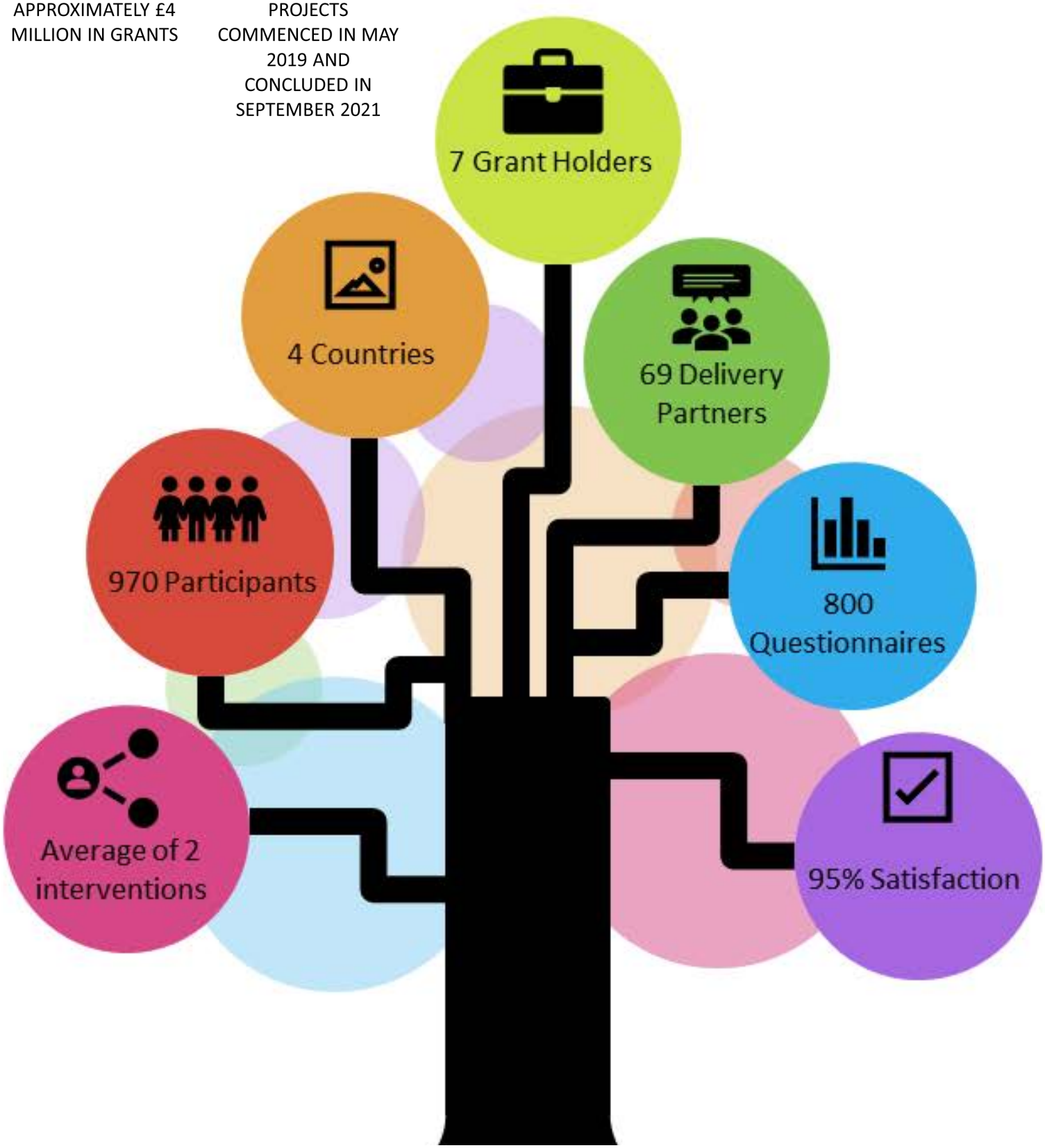
Anna Wright

CEO Armed Fo rces Covenant Fund Trust

Westminster Centre for Research in Veterans | University of Chester

APPROXIMATELY £4 MILLION IN GRANTS

PROJECTS COMMENCED IN MAY 2019 AND CONCLUDED IN SEPTEMBER 2021




Satisfied with the Programme
95%
Happy with support received
94%
Positive Programme Information
94%
Positive Programme Administration
93%
"Thank god for this, it has helped me get back on my feet mentally & physically. Seeing a future now"
88%
Positive on Programme Facilities
79%
Rated Intervention appropriate
8/10
Positive Impact on quality of life
60%
Previously accessed support

Executive Summary

In 2018, the Armed Forces Covenant Fund Trust (the Trust) allocated in the region of £4M to seven projects to address the problems caused by serious stress in veterans, their carers and families. The *Tackling Serious Stress* (TSS) programme was designed to improve veterans, their carers' and families wellbeing, whilst addressing the possible barriers to accessing health and social care. The rationale was that if veterans and their families were provided with appropriate interventions, within an environment that values leadership and tackles stigma, then stress can be effectively managed. The TSS projects commenced between May and October 2019 and concluded in September 2021. The University of Chester's (UoC) Westminster Centre for Research in Veterans (The Centre) was selected to support the grant holders and complete an independent evaluation of the TSS projects.

The Trust Trustees awarded grants to: CAIS - The All Wales Veterans and Wellbeing Centre; The Ely Centre and Inspire in Northern Ireland; Veterans First Point in Scotland; Walking with the Wounded, Wigan Council and Solent NHS Trust in England. These grant holders would work with regional delivery partners and accept entry into the TSS programmes through multiple routes including self-referrals, statutory bodies or Charities. From the outset, representing the participant's voices was a key part of associate working along the customer journey, welcoming beneficiaries as equal partners.

The TSS projects offered a mixture of different intervention options including psychotherapeutic such as Cognitive Behavioural Therapy, group activities, social prescribing events such as Equine Therapy, mentoring and educational courses and practical help with housing and employment. Webinars proved a novel way of connecting grant holders and sharing learning to provide real-time data to indicate what was helping beneficiaries and to identify how challenges were being addressed. These developments were then highlighted in E-Bulletins to be shared with the study participants. This was the first time the Trust has adopted such as approach.

The TSS programmes reduced depression, anxiety, alcohol misuse and improved health and wellbeing. Outcomes modelled using both healthcare and societal cost perspectives showed the programmes to be cost-effective, according to the NICE willingness to pay threshold from year 1, and cost savings reported from year 2. If the programme were to continue, there is strong reason to believe these per-person costs would only diminish over time, and the programme would improve further in cost-effectiveness.

The Participants

There were 970 participants enlisted onto the 7 programmes and all adults were given the option to complete a study questionnaire at both entry and exit from the programme, and 800 questionnaires were received. The veteran participants were predominately white British males, with a mean age of 49 years. Eighty-eight percent had served in the British Army, and the same percentage were Regulars; with 51% leaving as a Private soldier or equivalent. On average, they served for 10 years, and 79% had completed operational tours with the same amount having experienced a traumatic event. This was a group that self-reported high levels of mental health (MH) problems including anxiety (67%) depression (67%) PTSD (62%) and physical problems with the most common being musculoskeletal / back injuries (47%).

On entry to the TSS programmes, the veterans reported on average five significant predisposing factors and family members four. These included family stress, previous unresolved trauma traumatic exposure, relationship problems and social isolation. Veterans also reported an average of 10 symptoms and family members eight. These were similar and included: anxiety sleep disturbance and loss of confidence. The effectiveness of the programmes led to reductions of situational stressors from an average of 5 to 3 and a significant reduction in symptoms from 10 to 4, These improvements represent palpable benefits.

Help Seeking Behaviour, Social Isolation, Employment and Housing

Over 60% of participants reported having previously accessed recognised support services; specifically their General Practitioner or other MH services, but they either did not receive the provision they required or were discharged only for their problems to resurface. There were still a significant 31% of veterans who needed help who did not seek assistance. Many found it hard to look for help or were unaware of the available support. Improving knowledge and access to Primary Healthcare (PHC) and veteran specific services together with continued investment in destigmatising MH are required to improve access to the appropriate services.

Participants entering the TSS programme had poor social networks with over a fifth of them having no one to help them and 65% were not members of recreational clubs or organisations. The TSS programmes led to improvements in some social networks, with veterans being less reliant on people and more engaged in social activities and meeting more people. There were also improvements in veterans engagement with recreational clubs or organisations. The findings also demonstrated that veterans that reported higher

levels of stress were testifying to poorer help-seeking behaviour and had fewer social interactions and either grant holder continuity programmes or increased arrangements with local activities should be considered.

Over 40% of participants entering the programme with unemployed and living in rented accommodation; whilst 31% lived alone and 7% were homeless. Those employed were earning on average 24k per year. There were reports of improvements following the TSS programmes, but there is room for further progress.

Participants Feedback

Over 95% of participants were satisfied across all programmes; 94% were happy with the support they received and the programme information, whilst 93% were positive about the programme administration. In terms of the benefits on their quality of life, the programmes were measured constructively at 8 out of 10. There were 83% who knew how to make an official complaint although the benchmark should be 100%, and this is an issue to be addressed for future programmes. The participants provided particularly strong feedback regarding the support they received, and the positive impact on their health, wellbeing and improved social networks. Their recommendations for improvement centred around more contact and follow-up, more funding to support TSS programmes and a focus on assistance with personal affairs.

Challenges

Large periods of this programme were completed during the considerable practical challenges presented by the COVID-19 pandemic. The impact cannot be over-stated, especially as many grant holders had to switch to remote working and cancel key group activities. The full report will highlight how they circumnavigated these barriers and continued to provide veterans and their families with care and support. This did play a part in the number of questionnaires provided for the evaluation, although it was frustrating that the number of exit questionnaires from family members were below what was expected. This meant that an opportunity to get an original and important insight into the impact on family life were reduced. These implications highlight the importance of focusing on improving study recruitment and engagement into the evaluation process, and the potential for setting performance indicators for grant holders to achieve in relation to questionnaire uptake.

To the Future

The evaluation presents a very positive reflection of the TSS programme. The grant holder's clear commitment, motivation, intelligent application of resources alongside participant engagement led to accomplishments across the UK. The evaluation data provides a reservoir of valuable evidence to demonstrate success and insight into projects where improvements were required, and indicators of how to redress these issues. This provides clear information of how the expenditure was successful reducing stress by getting veterans and their families back into employment, improving their lifestyle, physical and MH and wellbeing, and helping with the interface / communication with health and social care. These findings can inform other veterans with similar issues but are not seeking help.

The study protocol provides a platform for building lasting collaborations and partnerships leading authorities and organisations, governmental agencies, professional bodies, charities, businesses, and appropriate networks, and access to other national and international committees under the same jurisdiction. Most importantly it presents those veterans and their families who need help with options to obtain the support they require.

Key Findings

- Across all the TSS programmes; over 95% of participants were satisfied with the support they received.

- On average, participants served for 10 years and 79% had completed operational tours and had experienced a traumatic event. They self-reported high levels of mental health problems including anxiety, depression, PTSD and physical problems.

- The mixture of different intervention options including psychotherapeutic, social prescribing and practical support produced significantly positive results and reduced depression, anxiety, alcohol misuse and improved health and wellbeing.

- The effectiveness of the programmes resulted in palpable benefits, with reductions of situational stressors from an average of 5 to 3 and in symptoms from 10 to 4.

- Outcomes modelling showed the programmes to be cost-effective, and would improve further in cost-effectiveness over time.

- Over 60% of participants had previously accessed support; specifically from their General Practitioner or other MH services. There were 31% who found it hard to look for help or were unaware of the available support.

- TSS programmes led to improvements in some social networking, with veterans being less reliant on people and more engaged in social activities.

- Large periods of this programme were completed during the full impact of the COVID-19 pandemic. Grant holders circumnavigated these barriers to provide care and support.

- The TSS protocol provides a platform for lasting partnerships with governmental agencies, professional bodies, charities, businesses, and appropriate networks.

- Connecting grant holders and sharing learning provided real-time data to indicate what was helping beneficiaries and to identify how challenges were being addressed.

- These findings can inform other veterans with similar issues but are not seeking help.

Introduction

In the UK, there is considerable focus on assisting veterans with the adverse physical and MH difficulties associated with their military career (House of Commons Defence

Committee, 2019). The UK is committed to ensuring that people who served in the Armed Forces and their families should face no disadvantage in the provision of public services. In some circumstances, they should receive special consideration (National Health Service (NHS), 2020a). The Armed Forces Covenant sets out the UK's commitment to those who have served in the Armed Forces by providing access to healthcare, as well as supporting several key disciplines, including the broader determinants of health, education, family wellbeing and housing (Armed Forces Covenant Fund Trust (AFCFT), 2018).

The Armed Forces Covenant Fund Trust (The Trust) delivers Covenant funded projects to support military veterans and their families. In 2018, the Trust launched the Serious Stress Fund (SSF), and opened a competitive grant to support veterans, families, and carers across the UK. Over two years, the Trust set aside approximately £4 million to fund seven *Tackling Serious Stress* (TSS) initiatives. These were: CAIS: The All Wales Veterans and Wellbeing Centre; The Ely Centre and Inspire in Northern Ireland; Veterans First Point in Scotland and Walking with the Wounded, Wigan Council and Solent NHS Trust in England. (Figure 1 & 2 Table 1).

These grant holders would work with over 60 regional delivery partners (detailed in Appendix A) and accept entry into programmes through multiple routes including self-referrals, statutory bodies or Charities. These programmes were required to improve the wellbeing of veterans, their families, and carers, and navigate any potential barriers associated with the Armed Forces Community (AFC) accessing healthcare. The rationale being that if veterans and their families are provided with appropriate interventions, within an environment that values leadership and that tackles stigma, then stress can be effectively managed. These projects commenced between May and October 2019 and concluded in September 2021.

The TSS programmes incorporated various interventions; with new ways of working within an informed, integrated commissioning approach. These programmes included a mixture of psychotherapeutic and practical support, educational or community projects, social prescribing, respite care, employment support, crisis intervention, and peer mentor case management. Programme delivery varied from clinical personnel to psychosocial teams and peers (Table 1).

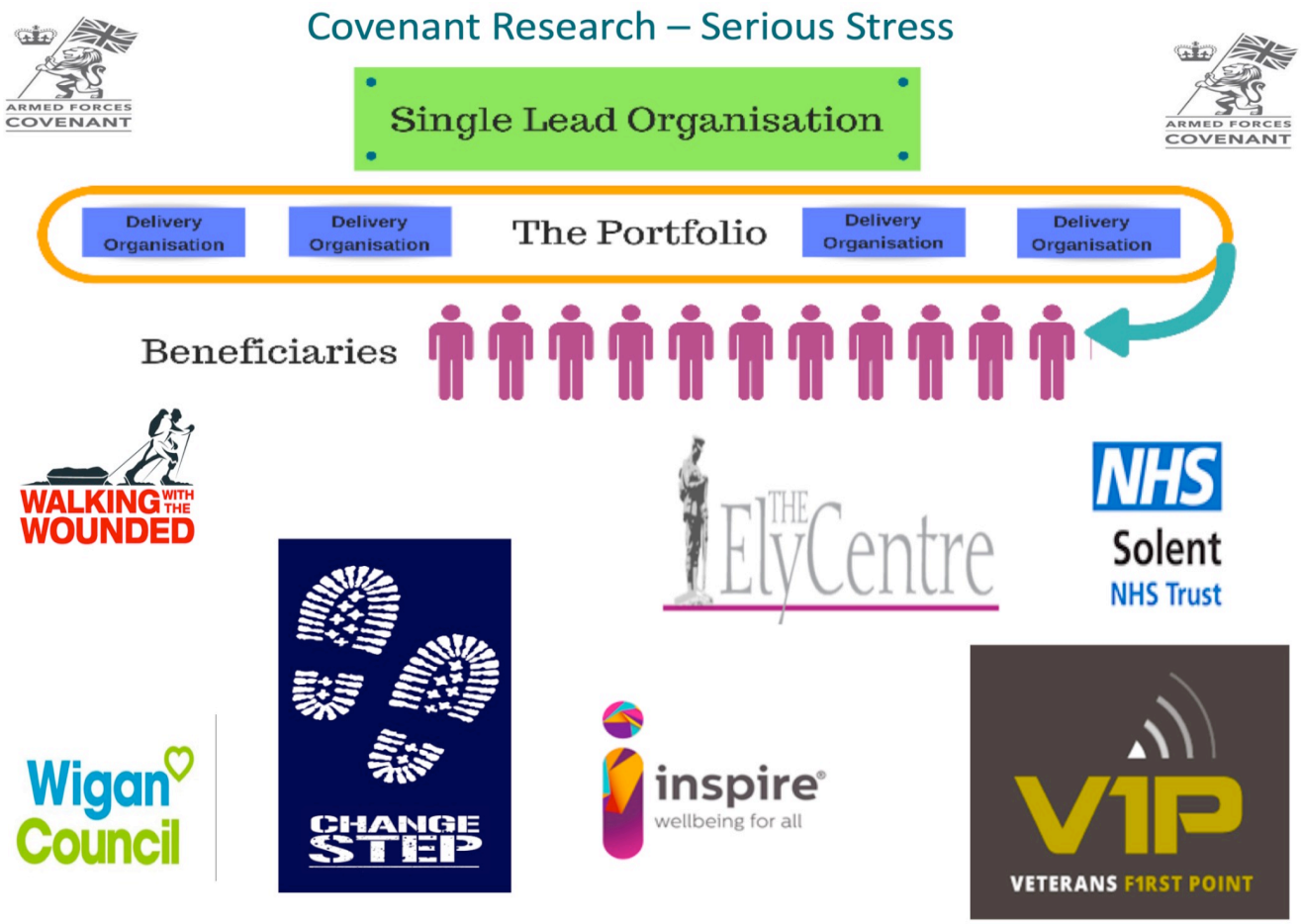


Figure 1. The TSS Grant Holders

Figure 2. Grant holder Locations

AWARDED ORGANISATION & COUNTRY	PROGRAMME NAME	AWARDED GRANT	PROGRAMME SUMMARY	PARTNERS ORGANISATIONS	RECRUITMENT TIMELINES (Start Date)
Tagsa Uibhist (Scotland)	Positive Community Wellbeing	£322,500	Recognising the lack of local provision, the Project aimed to use local resources more effectively to ensure that people get the 'Right Service at the Right Time and the First point of contact'. The programme intended to reduce the need for referral onto specialist services and support individuals to avoid experiencing a deterioration in their circumstances before they could access appropriate support. This would be delivered through nine portfolio partners.	Taigh Chearsabhagh, Caradean Uibhist, Chladadh Kirkibost, Royal British Legion Uist, CAB, NHS/Council, Hebridean Housing, Community Sports Hub, Uist Police.	Withdrawn
Veterans 1st Point (Scotland)	Live Life – Veterans and families	£700,000	The Project was structured to provide a range of opportunities for veterans and their families to reconnect and understand the issues and problems they faced. Veterans First Point used psychological intervention and provided a more coordinated approach to the network of care provision. Complimentary interventions were available to aid MH and wellbeing including peer support groups, social prescribing, and a programme of alternative respite options. This was delivered with eight portfolio partners.	Coming Home Centre, Cyrenians, Fares4free, Horseback UK, Lothians Veterans Centre, Rock2 Recovery, Stand Easy, V1P. Stand Easy UCalvert Trust	01/01/2020
Inspire (Northern Ireland, NI)	Recovery together	£703,000	The programme brought together a range of innovative wellbeing and support services across Northern Ireland. They were case managed and delivered within a stepped care model from low through to high-intensity support. The interventions aimed to address the perceived significant gap in support for veterans, their families and carers. This was delivered with nine portfolio partners.	Inspire Trauma-related Psychotherapies, Inspire Addiction Support Services, Blossoms Hub & Spoke Garden, Wellbeing in Mind Music Assisted Supportive Therapy, Horses for People Equine-assisted therapy, and personal awareness program, Assist Counselling Understanding post-traumatic stress disorders for families, Inspire Mental Health Advocacy, Inspire Mindfulness, Horses 4 People, Combat Stress.	01/07/2019

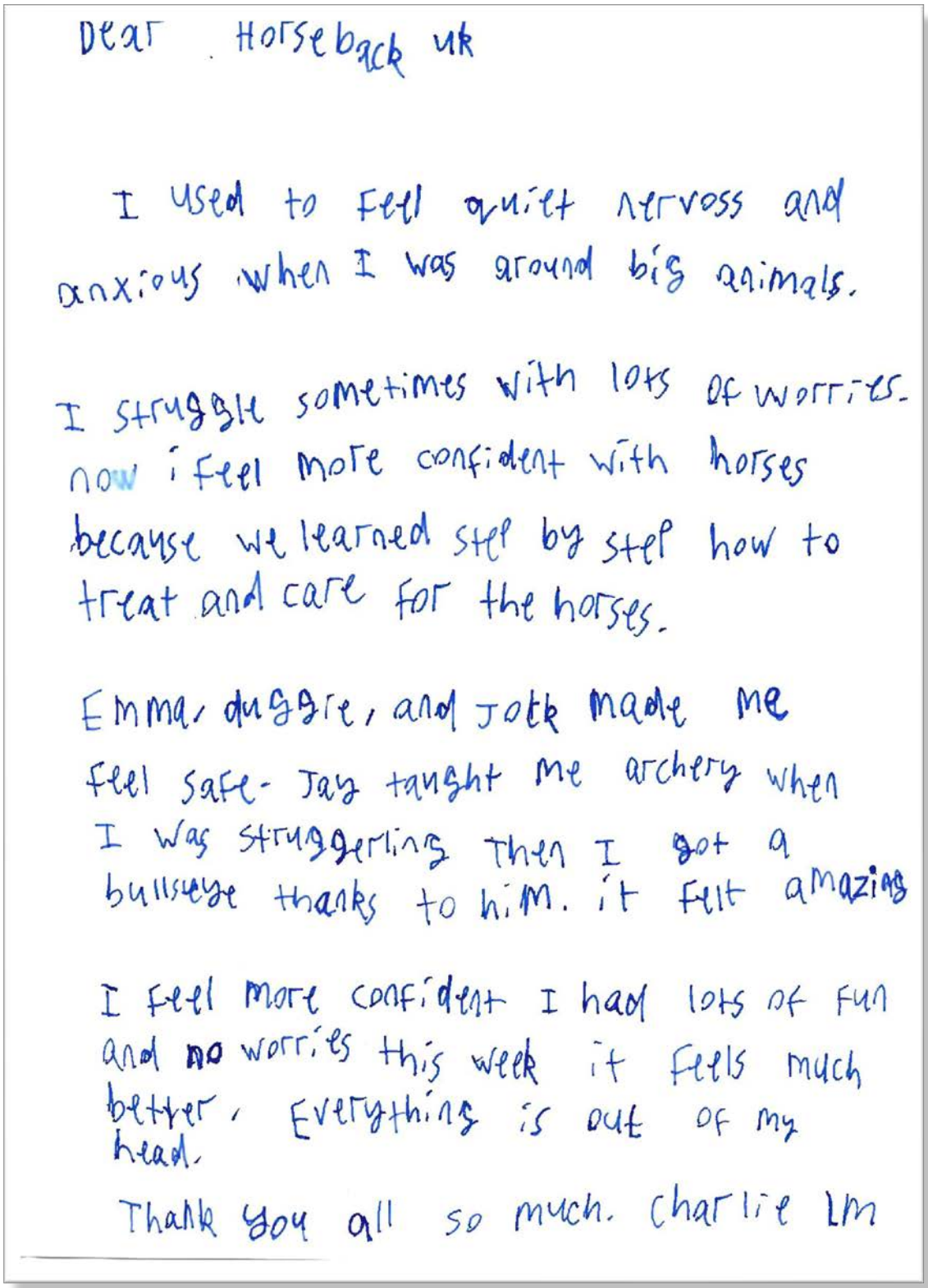
The Ely Centre (Northern Ireland, NI)	Northern Ireland Veterans Support	£220,000	The Ely Centre provided veterans and family crisis response support by delivering a crisis intervention and de-escalation service to veterans and their families or carers in County Armagh, Fermanagh, and Tyrone. This included health and wellbeing support interventions, intensive psychotherapy within a holistic approach to health and wellbeing and benefits/pension advice for veterans and their immediate families. There were social prescribing activities including gardening. This was delivered through three portfolio partners.	Brooke House defence garden scheme, Ely Centre, Victims & survivors service.	01/07/2019
Wigan Council (England: North West)	Unite, Inspire, Achieve programme	£478,500	Wigan introduced a way programme, developing support and care pathways to increase the quality of life and improve resilience for the veterans and their families. This was delivered through with three portfolio partners.	Wigan Armed Forces HQ, Healthier Heroes CIC peer mentoring, Wigan & Leigh Carers Centre, Addaction.	07/06/2019
Walking with the Wounded (WWTW) (England: North West)	Northern care Coordination partnership	£689,219	WWTW delivered a coordinated care pathway for veterans, and families in the Greater Manchester and Tyne and Wear regions. Their portfolio provided: local respite care to the veteran and his family. There was addiction treatment services, interventions for veterans experiencing severe stress to prevent them from progressing into crisis. Then residential services to enhance resilience, prevent relapse/crisis, and enable sustainable long term purposeful living. This was delivered through fifteen portfolio partners.	Calvert Trust, Warrior Programme, Click Therapies, Ripple Pond, Gateshead carers, Go Gateshead, Veterans in Communities, Gaddum Centre, North East Counselling Service, Angling Trust, Recyke Y Bike, Moving Forces, Tom Harrison House, Blue Line Taxi.	08/07/2019
Solent NHS Trust (England: South)	Portsmouth Military Wellbeing Alliance	£697,188	Solent's aspired to create a centre of excellence for military MH. This was delivered through a veteran-specific section of Wellbeing House, crisis intervention and ongoing support from trained peer workers, a new veterans' curriculum at the Solent Recovery College, dedicated support for veteran families and connections into established services in Portsmouth to support long-term recovery. This was delivered through five portfolio partners.	Solent NHS Trust – Talking Change, Solent MIND – Positive Minds, Solent MIND – Solent Recovery College, Society of St. James – Substance misuse, Solent MIND – QRF.	01/03/2020

The University of Chester's (UoC) Westminster Centre for Research in Veterans (The Centre) was awarded a grant to undertake an independent evaluation of the SSF initiatives. The evaluation aimed to advance knowledge and understanding of the predisposing factors and the associated symptoms that resulted in veterans, carers and their families experiencing serious stress. This included exploring the impact and effectiveness of the seven TSS programmes. The evaluation was designed to identify trends and risk factors (including gender, age and previous rank) and indicate if there were vulnerable groups who were more prone to serious stress. This extended to determining whether aspects of civilian and past military life, the support of the NHS and veteran specific Medical Services, operational linked stresses and stigma were significant contributing factors in affecting access to veteran services. Then to explore if the programmes offer value for money (value measured by health, environmental and social outcomes) and how effectively this work could be replicated more widely. The evaluation was predominately a quantitative study, with an option for participants to add written comments, with information obtained via a survey administrated at Entry (Timepoint 1: pre-intervention) and Exit (Timepoint 2: post-intervention) of the programmes. The results are intended to help facilitate the development of an evidence-based model to effectively manage stress in veterans, their families, and carers.

Case Studies

Grant holders had an opportunity to provide case studies to exemplify their programmes and outputs. As a result, The Centre received nine case studies from CAIS, Inspire, Solent NHS Trust, Veterans 1st Point, Wigan Council and WWTW. The case studies provide further insights above and beyond the surveys and psychometrics for assessing serious stress in veterans and family members by providing a complete picture. In addition, the case studies provided are rich with emerging evidence, highlighting the positive impact of these services to best support veterans and their families. These case studies will appear at regular periods throughout this report.

Case Study 1: Veterans 1st Point Scotland



Dear Horseback uk

I used to feel quiet nervoss and anxious when I was around big animals.

I struggle sometimes with lots of worries. now i feel more confident with horses because we learned stel by stel how to treat and care for the horses.

Emma, duggie, and Jokk made me feel safe- Jay taught me archery when I was struggerling Then I got a bullseye thanks to him. it felt amazing

I feel more confident I had lots of fun and no worries this week it feels much better, Everything is out of my head.

Thank you all so much. Charlie Lm

Background

Background – British Armed Forces

The inclusion criteria to be classified as a UK military veteran is one day of service in either the Regular Armed Forces or Reserves (Ministry of Defence (MOD), 2017). The UK veteran population is estimated to be 2.4 million (House of Commons Defence Committee, 2019). Military veterans are embedded within the AFC, including their families and serving personnel. Veterans' are a diverse heterogeneous group that differs by age, trade, gender, length and type of service. The veteran population is estimated to be 89.5% (N = 2,348,000) male and 10.5% (N = 276,000) female (Ministry of Defence, (MOD), 2019b). Fifty-two per cent of the veteran population is estimated to be 75 years old or older (The Royal British Legion (RBL), 2014; Ministry of Defence (MOD), 2016), and 70% are 60 years and over (2019) (Ministry of Defence (MOD), 2016).

Although veterans do not seem to differ from the general population in terms of health and the majority report good health (Ministry of Defence (MOD), 2020), it is essential to highlight that the risk of MH illness appears to be higher in: early service leavers (Buckman et al., 2013; Bergman et al., 2016), those that experience combat (Fear et al., 2010; Osório et al., 2017), those evacuated from operational tours due to an injury (Forbes et al., 2010) and reservists (Harvey et al., 2012). PTSD amongst veterans is estimated to be 6% in 2014/16 (Stevelink et al., 2018), compared to a rate of 4.4% within the general population (Fear, 2014).

Information regarding serving personnel can be found in the MOD 2020 Family Continuous Attitude Survey ((FamCAS), 2020) which reports approximately 62,000 service personnel are married or in civil partnerships. Service partners are mostly females under 40, and 79% are employed. However, 50% of spouses do not feel part of the wider community, and 33% would feel happier if their partner left the Armed Forces, with spouses who move regularly feeling pessimistic about service life (FamCAS, 2020). In the Armed Forces, families overall satisfaction is good, where 79% have children, and 60% are homeowners. Moreover, the proportion of families accessing MH care services continues to increase, from 14% in 2016 to 22% in 2020. In addition to this, the proportion of families highlighting barriers to treatment has also increased, even though the military families / AFC should not face any disadvantages when accessing any public service (FamCAS, 2020).

Serious Stress

Some veterans have complex and challenging needs ('serious stress') that impact upon their daily activities and quality of life. These complicated MH illnesses can be a challenge for

community-based services (Armed Forces Covenant Fund Trust (AFCFT), 2018). In the Armed Forces, exposure to stressful events can occur regularly. These situational stressors will influence the onset of MH disorders (Finnegan et al., 2010). Life events such as relationship problems (Lindert et al., 2018), family problems (Bohman et al., 2017), and occupational issues (not military-specific) (Theorell et al., 2015) are the most common stressors leading to MH problems within the Armed Forces irrespective of rank, age, and gender (Finnegan et al., 2014). Then there are military lifestyle stressors such as operationally linked traumatic events, separation from their family and friends, and regular changes in accommodation (Ashcroft et al., 2017). Individual responses will depend on their coping mechanisms which can sometimes exacerbate the problem, for example alcohol misuse (Thandi et al., 2015). Armed forces research also indicates that female soldiers are more likely to attend MH assessments, be admitted to a hospital for MH disorders and are more susceptible to depression and stress (Finnegan, 2011). MH disorders can also be higher in those who identify as LGBTQ (Mark et al., 2019), those who have experienced adverse childhood experiences (ACEs) (Carroll et al., 2017; Koola et al., 2013; Ross et al., 2018), and those who experience combat or who leave the armed forces due to a physical condition (Fear et al., 2010; Forbes et al., 2010; Osorio et al., 2017).

When looking at the veteran population, evidence of anxiety and depression is more common among veterans who were either divorced, not in paid work, caring for someone else in their household, or living on their own (The Royal British Legion, (RBL), 2014). Regarding the susceptibility of MH issues, veterans exposed to operationally linked traumatic events, particularly when colleagues were injured, are more likely to suffer from MH issues (Ashcroft, 2017). However, the impact of stress on veterans and their families and / or carers is under-researched.

Help-seeking within the Armed Forces (Finnegan et al, 2014) and veterans (Ashcroft 2017; Forces in Mind Trust, 2018;) is poor, with men in particular likely to "bottle up" their feelings, fearing the impact of sharing personal burdens with their family or appearing weak (Finnegan et al., 2014; Ashcroft 2014; Thandi et al., 2015; Ahren et al., 2015; Randles and Finnegan, 2021). Barriers to help-seeking behaviour were stigma, military culture of stoicism, history of operational tours, and service difficulties (Randles and Finnegan, 2021).

Veteran Service, Primary Healthcare, Social Prescribing and Charities

Health care for UK Armed Forces serving personnel is provided by the MOD. In contrast, for veterans and Armed Forces families, health care is provided by the NHS. Veterans are entitled to priority treatment for operationally related (physical and MH) conditions. With MH issues, veterans can access NHS specific services. The NHS has sought to improve its

provision of MH care to support veterans through Op COURAGE: The Veterans Mental Health and Wellbeing Service. This is an overarching term for the Veterans' Mental Health Transition, Intervention and Liaison Service (TILS), the Veterans' Mental Health Complex Treatment Service (CTS) and the Veterans' Mental Health High Intensity Service (HIS) (NHS 2021). There is also Military Veteran Improved Access to Psychological Therapies (MVIAPT) This model offers multiple access points (including self-referrals) in conjunction with a better understanding of the service culture. Compared to other models that provide treatment and support options only (including advice/referrals to housing and debt service to facilitate an integrated approach), multiple access points appear to be more effective for early leavers (Clarkson et al., 2013). Then there are a number of options for physical help including the Veterans Trauma Network (NHS, 2021), and other or other community/voluntary 3rd sector services. To address poor help seeking, facilitators surrounding positive help-seeking behaviour included suppressing the stigma through awareness campaigns and highlighting military leaders and other veterans to promote positive help-seeking behaviour. Moreover, veterans in crisis were more likely to seek help. Subsequently, identifying specific reasons for poor-helping behaviour through *Tackling Serious Stress* initiatives via participant narratives will help understand how to best support the minority of veterans and families who need MH support.

A reason for poor access to some services can be linked to veteran registration in PHC where approximately 8% of veterans are correctly registered (Simpson & Leach; 2014; Finnegan et al., 2018). As a result, veterans may not be accessing the support that is available for them and this can lead to excessive delays in addressing operationally attributable MH issues, often left until they are in crisis or socially isolated (Combat Stress, 2017). Social prescribing interventions may however help mitigate serious stress by positively and successfully promoting help-seeking and reducing stigma. There are alternative or complementary initiatives for dealing with depression and stress that have emerged. These include yoga (Cabral et al., 2011), mindfulness (Creswell, 2017), and canine therapy (Krause-Parello et al., 2016). In addition, veterans can improve their wellbeing by participating in organised recreational activities (Bowler et al., 2010), such as archaeology (Finnegan, 2016), horse riding (Horseback UK, 2020), horticultural (Wise, 2015), walking and water sports (Veterans in Communities (VIC), 2019). These extend to specific groups such as blind veterans (Blind Veterans UK, 2019). See Appendix B. Service charities can aid by providing a community interface and signposting veterans and their families to NHS MH care.

Depression and Suicide

The epidemiology of depression is associated with the onset of other physical and MH symptoms and disorders, such as suicide, deliberate self-harm (DSH), sleep problems and physical pain (Cuijpers et al., 2013; Kang et al., 2015) and other MH disorders (Baker, 2020). However, depressive symptoms in males (including AF personnel) relative to the ICD-11 (WHO, 2022) definitions can differ regarding the presentation of depression. Traits include anger and potentially fighting, emotional rigidity, self-criticism, alcohol or substance misuse, risk-taking behaviour, or social withdrawal (Cochran and Rabinowitz, 2000; Finnegan et al., 2014; Winkler et al, 2005) . Guidelines provided by NICE (2011) include the provision of supportive information and assessment for service families. In addition, the impact of depression and MH problems that are not addressed in one family member has a ripple effect on other family members (Hughes et al., 2017, Steenkamp et al., 2018). Whilst paradoxically strong support from a family member (or other significant individuals, or social networks) can protect against depression (Hughes et al., 2018). In relation to UK carers, 55% have reported suffering from depression (Carers UK, 2015).

The occurrence of suicide in the Armed Forces is comparatively lower than the general population except for young men (Bergman et al., 2017; MOD, 2019a;). However, when they leave the Armed Forces veterans who do attempt suicide have a higher mortality rate than civilians (Bergman et al., 2018; Hines et al., 2013; Jones et al., 2019). Rates of suicide are higher in men (Office for National Statistics, 2021) and Northern Ireland (Appleby et al., 2017). DSH is higher in women (Pompili et al., 2013). Additionally, early service leavers and those who leave at a lower rank are at increased risk (Bergman et al., 2017, 2018; Jones et al., 2019; Kapur et al., 2009; Woodhead et al., 2010). Significant predictors leading to suicide and DSH include common life stressors, such as poor social networks, being separated, ACEs, and multiple physical and MH issues, including a strong link between suicidal ideation and self-harm (e.g. depression, anxiety, PTSD, and other; Bergman et al., 2018; Hines et al., 2013; Jenkins, Stevelink, & Fear, 2017; Jones et al., 2019, 2020; Pinder et al., 2011; Ridge et al., 2021; Rozanov & Carli, 2012). Protective factors include stable relationships, meaningful goals in life, coping skills, and religious beliefs (Stack & Laubepin, 2019). A focus should also be placed on addressing situational stresses, reliving physical conditions, improving rehabilitation and pain management, social support, reducing stigma, and encouraging positive engagement with healthcare providers.

Case Study 2: Wigan Council

Male Veteran (24) his partner female (23) referred to the unite inspire achieve programme 22nd August 2019. Issues presented with attempted suicide (male), housing issues (landlord threatening to evict due to arrears also no repairs to property.) Case Managed on the complex pathway. Interventions delivered: secured a tenancy with the Local Authority, accessed welfare support via Citizens Advice regards debt, linked in to Health and Wellbeing activity (Football for Forces) and additional employability support resulting in female gaining part time work (also a full-time student) and person-centred counselling via our in-house Mental Health Service Manager The couple were signed off the programme in February 2020 as both settled and progressing in life.

Referred to the HQ by think wellbeing services after a further suicide attempt by male, female also presenting with sever anxiety and depression. The referral came about due to loss of male's job due to COVID resulting in rental arrears from inaccurate Universal Credit Claims. Case picked back up. Immediate interventions actioned: Counselling to ensure stability while waiting for Triage from Mental Health Team, Arrears cleared using the HQ Welfare Fund to stop eviction process and liaison with early tenancy team. Both parties were accompanied to the GP to review mental health prescribing and female placed on medication to support suicidal ideation, food parcels supplied and regular support and communication from Caseworker. Now looking at employability, money management, talking therapy to support prescribing in addition to working closely with the early tenancy team to ensure the couple keep hold of secure accommodation.

This case shows the real impact that the COVID 19 pandemic has on our beneficiaries, whom would have otherwise been able to build better life chances.

PSYCHOMETRICS

REDUCTIONS IN

- Anxiety
- Depression
- Alcohol & substance misuse

IMPROVEMENTS IN

- Health & Wellbeing

Aims and Objectives

Aims

The aim of the evaluation was to indicate the overall impact and effectiveness of the *Tackling Serious Stress* initiatives, including their achievements and challenges.

Objectives

The objectives were to:

1. Identify trends and risk factors (including gender, age, and previous rank) and indicate if vulnerable groups were more prone to serious stress (e.g., whether aspects of their life or military service were contributing factors to stress)

2. Determine whether aspects of civilian and previous military life, the support of the NHS and veteran-specific Medical Services, operational linked stresses and stigma were significant contributing factors in affecting access to veteran services.

3. Evaluate the effectiveness of the TSS programmes and areas for development.

4. Gauge participants views regarding their satisfaction with the TSS programmes and the impact on their quality of life.

5. Exploring if the programmes offer value for money and how effectively this work could be replicated more widely.

The results are intended to inform policymakers and assist in commissioning veteran and family specific services and to provide a scientific basis for developing an effective model to tackle serious stress that could maximise quality of life, health, and social outcomes.

Methodology

Common Assessment Framework (CAF)

Common assessment frameworks that provide the structure for simultaneous evaluations are uncommon. *The Tackling Serious Stress* CAF model introduced in this report was informed by W.K. Kellogg's Foundation's Logic Model Development Guide and Evaluation Handbook (WK Kellogg Foundation (WKKF), 2006; WK Kellogg Foundation (WKKF), 2010), the National Institute of Mental Health (NIMH) MH information (NIMH, 2018); and a Ministry of Defence (MOD) assessment of Military MH hospital admissions (Finnegan et al, 2014). *The Tackling Serious Stress* CAF was designed using various layers, placed along a continuum that could be extended depending on the requirements and complexity of the projects (see Table 2).

The framework provides the structure for the collection of standardised, valid, and reliable information from multiple activities and a clear pathway from the collection of data to the dissemination of results, which would assist in offering value for money in the short, medium, and long-term. The findings emphasise generality, universality, and sustainability to reliably inform policy and highlight success, efficiency, safety, cost-effectiveness, markers for future development, and details to inform occupational recommendations regarding the emerging themes.

Sample Size and Eligibility Criteria

Entry into the *Tackling Serious Stress* programmes was designed for multiple routes, including self-referrals, statutory bodies, or charities. Once a beneficiary had been assessed at one of the seven Tackling Serious Stress grant holders, beneficiaries were referred to over 60 delivery partners that provided a variety of interventions. The grant holders anticipated participant enlistment ranging from 100 to 550 participants, resulting in a sample of roughly 2000.

Layer	Requirement	Example	Data	Results	Comment
1a	Demographic & Population Specific Detail	Age, gender, length of occupation.	Quantitative – Entry & Exit Questionnaire.	Mean, spread and distribution of results in areas such as ethnicity, gender, and age. Include Likert Scales.	Provide baseline data and measure the quality of intervention – may indicate statistical significance. Can include written text for content analysis. Individual beneficiary's specific intervention and the benefits gained.
1b	Specific population stressors	Housing, accommodation, education, finance and employment			
1c	Current situational stressors (empirical basis)	Relationship, family problems, occupational stressors			
1d	Exit Data	To include evaluation and satisfaction			
2a	Psychometric Questionnaires	Mental and Physical Health. Quality of Life & Wellbeing.	Validated such as GHQ, AUDIT, WEMWBS (see text for detail)	Annotate measures of improvement/deterioration	Can be applied at times along the different times (pre and post) for longitudinal analysis.
2b	Health Programme	Weight, blood pressure, alcohol consumption	Primary and Secondary measurements		
3a	Commissioner's Performance Indicators	Defined per grants programme	Quantitative	The measure of success against stated criteria.	Can be captured at other periods such as monthly.
3b	Advanced Audit	Consideration of existing data sets, research	Quantitative	Retrospective measurement of data.	Can provide legacy detail and pointers for development. Lessons learnt.
4a	Self-Declarations & Ripple Effects	Benefits for the whole family or close friends/relations. Highlight areas for development.	Qualitative	Personal qualitative interviews such as case studies. Indicators of wider beneficiary improvements.	Determine the influence of the local medical services, lifetime stresses, stigma, and help-seeking
4b	Focus Groups			Group discussion.	behaviour.
4c	Journey Mapping – Veterans Voice	Customer journey mapping technique		View of the beneficiary's journey.	Process of tracking and describing all the experiences that customers have as they encounter a service or set of services.
5	Social Return on Investment	Use of medication, resolution of health issues, beneficiary specific detail such as return to employment	Quantitative	Determine extra-financial value measured by health, environmental and social outcomes relative to the resources invested.	Calculating the social, environmental, and economic impacts.
6	Research Specific – Randomised Control Trials	Allocating personnel to a control group could be standard practice or no intervention	Quantitative	Inferential statistical calculation and indicated of transferability of results	Power calculation for defined sample size.

AUDIT, Alcohol Use Disorders Identification Test; GHQ, General Health Questionnaire; WEMWBS, Warwick-Edinburgh Mental Wellbeing Scale.

Table 2. Outcomes Measurement Framework (CMF) data collection model.

Questionnaire design

The questionnaire was designed to ensure compliance with the Trust's performance indicators. Next was to establish the best data collection methods while using military knowledge and experience to demonstrate a clear insight into the literacy levels and abilities of the beneficiaries included in the study. The study team assessed the volume of work, geographical challenges and sample group characteristics and allocated research resources appropriately. The development phase is outlined in Figures 3 and 4.

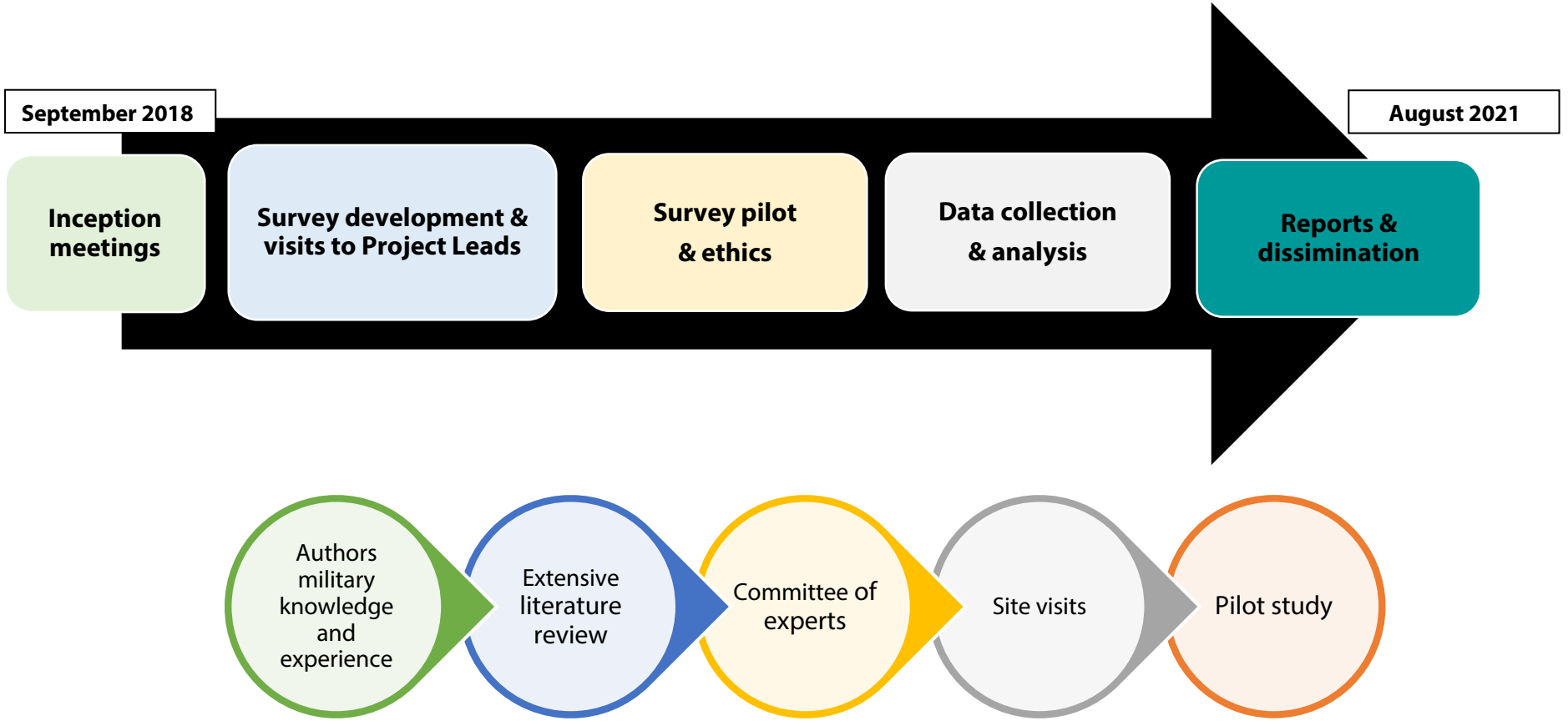


Figure 3. Flowchart of the study procedures and the development of the evaluation Outcomes Measurement

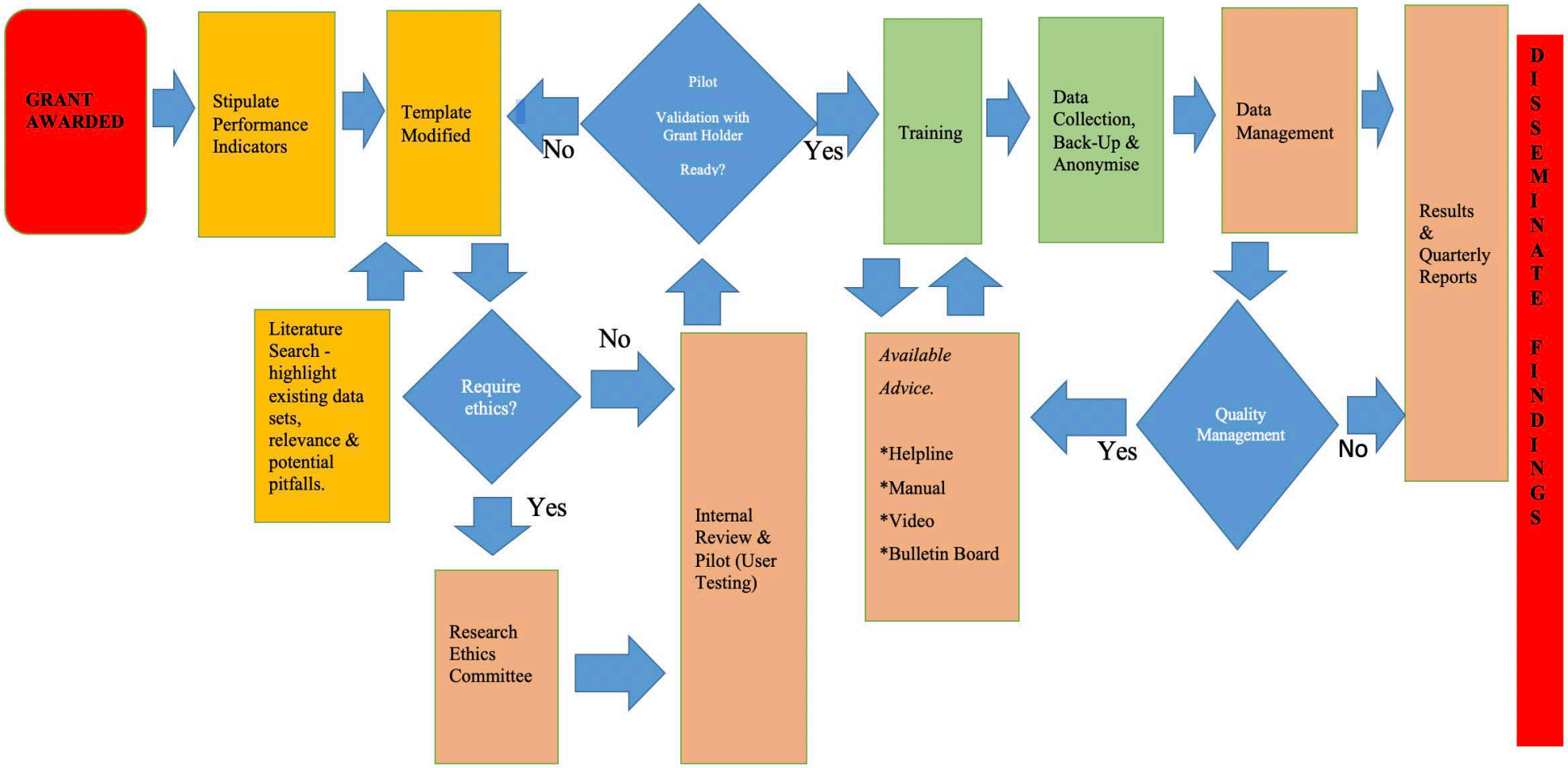


Figure 4. The Outcomes Measurement Framework

The principal investigator (PI) designed the questionnaires.[1] The data collection configuration was chosen to facilitate the sustainable collection of information from multiple activities, with a structure based on best practice guidelines for questionnaire design, interviewing and attitude measurements (Oppenheim, 2009). The questionnaires captured core demographic data (age, gender, socioeconomic status, relationships, sexual orientation, ethnicity, dependent children, and occupation). In addition, demographic data provided profiling information to help meet the study's aims, explore whether certain groups responded better to *Tackling Serious Stress* initiatives, and highlight vulnerable groups. Moreover, military-specific detail regarding branch and length of service, rank, cap badge and operational tours was included. Questions exploring current stressors such as finance, education, housing, employment, and accommodation were also included. Information was also gathered to identify motivators that encouraged participants to engage with *Tackling Serious Stress* initiatives and the role of the local medical services, lifetime stresses, stigma, and help-seeking behaviour.

The questionnaires included tick boxes for answers to annotate the participants' exposure to biopsychosocial situational stressful factors. These were supplemented with Likert scale questions to measure outcomes and to reflect changes at different stages throughout the *Tackling Serious Stress* initiatives. Space was provided for written content; participants could express their concerns and highlight actions taken to resolve problematic issues surrounding significant events. It was crucial to capture participant satisfaction; this provided a valuable way of evaluating outcomes and monitoring service quality information; this was included in the exit questionnaires.

Additional validated and reliable psychometric questionnaires were added to establish feasibility and sustainability by assessing physical health, MH and wellbeing. Psychometrics included the Patient Health Questionnaire-9 (Kroenke et al., 2001), Generalised Anxiety Disorder-7 (Spitzer et al., 2006), Warwick-Edinburgh Mental Wellbeing Scale (Tennant et al., 2007), and the Alcohol Use Disorders Identification Test (Bohn et al., 1995). In addition, a cost-benefit analysis was included to model the economic returns that could be expected during different payback timescales. The cost-effective analysis provided extra financial value measured by health, environmental and social outcomes relative to the resources invested. This data was supplemented by the EuroQol Five-Dimensional Questionnaire (EuroQol Group, T. E., 1990) and the Work Productivity and Activity Impairment Questionnaire (Riley et al., 1993). The Centre obtained copyright permission for the questionnaires.

[1] Questionnaires available at: https://www1.chester.ac.uk/westminster-centre-research-veterans/research/serious-stress-veterans-carers-and-their-families

Internal verification followed consultation with clinical and administrative staff, military, legal, lay personnel, veteran groups, and AFC family members. A committee of senior personnel from charities, academia, NHS, and the MOD provided more comprehensive external consultation. Following review, recommendations for additional questions were added. Final draft questionnaires were sent to grant holders for their feedback, including recommendations surrounding the most efficient way to evaluate *Tackling Serious Stress initiatives*. This consultation laid the foundations for consistency in interpreting the questions sets and informing any amendments.

The result was the production of six questionnaires: three for entry into a programme (veteran, family members and carers) and three for the exit, which included participant satisfaction data. The questionnaires took approximately 15–20 minutes to complete and were written in plain English and made available in paper format and online. Questionnaires were available in Welsh and other formats, such as larger font for the elderly and those with eyesight difficulties. These processes were intended to ensure consistency in the interpretation of any questions sets. In addition, questionnaires were coded with a unique participant identifier to ensure pre-questionnaires and post-questionnaires could be matched whilst ensuring confidentiality.

Grant Holders

Grant holders facilitated community projects, social prescribing, respite care, employment support, crisis intervention and peer mentor case management with delivery from clinical personnel, psychosocial teams, and peers. Projects followed the principle that stress and associated physical and MH problems affect the whole family, and recovery requires resilience from the family unit.

The PI conducted site visits at the chosen location of the grant holders as they needed to accept ownership for data collection and quality. The Centre provided direction on completing the surveys, anonymised personal identification, storage and backup, secure transfer of information, and disclosure of personal or sensitive information. The visits included testing practice scenarios and vignettes; this process reaffirmed the importance of an independent evaluation. These visits highlighted that completing the entry questionnaire must make sense to the grant holders, delivery partners and, most importantly, the participants. This was not at the first meeting on some occasions, as the participant's health and immediate support were the clinical priority. Completion of the questionnaires could be completed once the participant was feeling better. Grant holders were also able to provide extended maintenance/safeguarding interventions following the *Tackling Serious Stress* initiatives. Therefore, grant holders would not wait for participants to be heading out of the door to ask them to complete the exit questionnaires.

Instead, they would receive the supportive information following completion of the specific *Tackling Serious Stress* element.

The Centre produced accompanying reference/guidance material in the form of a step-by-step (question-by-question) questionnaire completion guide; this guide was made accessible via the UoC website portal. A telephone number and email helpline were made available to all grant holders with the intent to answer queries as soon as possible and within 48 hours (on working days). Emerging themes were added to a question-and-answer section located on The Centre's website. These measures were intended to resolve problems and safeguard the quality of the results.

There was recognition that veterans were often reluctant to seek support and were negatively influenced by stigma, and often mistrusted official services and subsequently hid their symptoms. In addition, there was sensitivity regarding factors such as potential legal implications or substance abuse. As such, they may be fearful that disclosure would result in disciplinary action, compromising the overall feedback quality. The anonymous and confidential nature of the evaluation partially addressed this, and an E-Bulletin was one way of sharing the study team's military background with the grant holders. See Figure 5, and all are available at Westminster Centre for Veterans (2021) Research Website

https://www1.chester.ac.uk/westminster-centre-research-veterans/research/serious-stress-veterans-carers-and-their-families

Tackling Serious Stress in Veterans, Carers and Families E-Bulletin

May 2019

University of Chester

Update from Principle Investigator, Professor Alan Finnegan PhD RN FRCN FAAN

University of Chester

Welcome to the inaugural Serious Stress e-Bulletin, which intends to provide updates from the Centre and AFCFT, and include information from all grant holders.

Time has moved quickly since the University of Chester's Westminster Centre for Research in Ageing, Mental Health and Veterans was commissioned to provide an independent evaluation of the initiatives funded under the Serious Stress in Veterans, Carers and Families Programme. To ensure this occurs, it is of paramount importance that the collected data is accurate, authentic, and reliable, so that the results improve the health and wellbeing of the Armed Forces Community.

Successful grant holders and delivery partners are responsible for the collection of standardised, valid and reliable information. The evaluation framework uses core questionnaires to capture key information (e.g. trends and risk factors) on entry and exit from the programme initiatives. Additional validated and reliable psychometric questionnaires will measure anxiety, depression, well-being, and alcohol use. This will help advance knowledge and understanding of the predisposing factors and the associated symptoms that resulted in veterans, carers and their family experiencing serious stress. Then there are additional questionnaires to determine cost-effectiveness and extra-financial value measured by health, environmental and social outcomes.

I would like to reaffirm my personal thanks to the grant holders who hosted my visits, I thought the meetings went very well. It was great to listen to the enthusiasm and passion for this work. Questionnaires, the participant information sheets, and consent forms, were shared with grant holders before the site visits, and I thank everyone for the feedback which helped ensure consistency in the interpretation of any questions sets. The meetings also provided an opportunity to discuss the eligibility criteria and transmission within an independent evaluation that is anonymous and confidential. Unfortunately, Tagsa Uibhist decided not to progress with their proposal, leaving seven successful UK grant holders. The visit schedule is in Table 1.

Westminster Centre for Research in Ageing, Mental Health and Veterans | University of Chester

Figure 5. E-Bulletin

Patient and Participant Involvement

Representing participants' voices was a crucial part of associates working along the participants' trajectory. The role of delivery partners reflected the priority to embrace public and user involvement, welcoming participants as equal partners alongside other collaborators (Table 3).

1	Participants enrolled: The study team gauge participants' understanding of the data collection methods and language used. Participants may highlight problems; for example, participants may not disclose information for reasons such as distrust or the release of sensitive/incrementing evidence. This would determine if questions needed to be amended or added to reflect participants' views.
2	Participants who have completed a programme: Gauge their assessment of the validity of the question set and identify shortfalls.
3	Delivery Partners: Assess fieldworkers and their commitment to engage and understand data collection; provide feedback surrounding the challenges encountered and benefits.
4	Key figures: For example, older population studies, community nurses, care home assistants and charities would be included. Their opinions would help highlight key characteristics.
5	Spouses and family members: Determine their views and identify the "ripple effect" where benefits to the participant impact the wider family.

Table 3. Public and Participant Involvement

At the earliest opportunity, the researchers held telecommunication calls focusing on the evaluation questionnaires, data collection and transmission via information technology platforms (e.g., Zoom/ Microsoft Teams). The grant holders were aware of the importance of communicating to participants, as this is an essential requirement to support the follow-up of data acquisition. The Centre's strategy for engagement with respondents was built on clear and consistent communication within a close working relationship with proactive assistance. The study team's background and understanding of military language and abbreviations offered another layer of credibility.

Data Collection Management, Storage and Sharing

Data collection was the responsibility of the grant holder, which expedited data collection over multiple sites across a large UK geographic area. Governance arrangements were installed to ensure data integrity, protection, and confidentiality from the point of creation throughout the study duration. The grant holders nominated a person responsible for data collection; questionnaires were made available via paper or online formats.

The questionnaires were submitted to The Centre weekly, quality checked, and, where appropriate, referred to the delivery partner coordinator for clarification. The Centre also initiated weekly phone calls with grant holders and ensured that the questionnaires received matched the number of participants registering for programmes. In Year 2, monthly online webinars were introduced to highlight successes, share learning and highlight ongoing challenges.

The *Tackling Serious Stress* initiatives were not a linear process, with grant holders utilising multiple delivery partners for a single participant, which from a coding aspect was challenging. Therefore, grant holders were advised to code either: a) the first delivery partner offering support or b) the delivery partner offering the most support. The participant's written feedback helped address this narrative by capturing the complexity of the *Tackling Serious Stress* initiatives.

Quantitative data were inserted into the IBM SPSS Statistics software database V.27, and qualitative data were entered and coded using the NVivo software package V.12 (See Appendix C). In addition, the data collection and interconnectivity of databases facilitated the option to share and export data to other modalities compatible with government, academic and health service configurations, enabling data to be compared, contrasted, and benchmarked as required.

Data analysis

Data analysis combined demographic detail with an inferential statistical examination; this included an analysis of variance (ANOVA), non-parametric tests and regression analysis that facilitates an estimate for identifying the relationships among variables, including procedures for modelling. The multivariant analysis would identify significant correlations to present the multifactorial causes of stress. In addition, data management was extended to accommodate validated psychometric questionnaires. Subsequently, the intent was to produce a result to inform policy, highlight success, efficiency, safety, and cost-effectiveness, and provide markers for future development.

Small amounts of free-text written responses were evaluated via content analysis (Burnard, 1991). Quantitative and qualitative information were triangulated to examine emerging classifications from different cohorts or interventions to demonstrate relevance in various settings. In the initial stages, the participants were diligent in comprehensively completing the questions. As a result, analysis has produced accurate, authentic, and reliable data to provide resources that actively help beneficiaries and inform clinical practice, education, and policy.

Ethics

The TSS evaluation received ethical approval from the UoC Faculty of Health and Social Care Research Ethics Committee on the 12th of March 2019 (RESO219-958/Staff Project), and no further amendments were required. The Centre applies systematic and structured access to the data at the earliest stage to ensure security of patient identifiable information. The Centre received anonymous and confidential data, and the researchers did not know the identity of the participants. There was the potential that the studies psychometric questionnaires would duplicate those being used for a clinical assessment. These factors were detailed in a comprehensive invitation letter, participant information sheet, informed consent form and participants were given full transparency of the data storage requirements.

Cost-effectiveness analysis

The evaluation includes the examination of the cost-effectiveness of the TSS programmes via a cost-utility analysis (CUA; Kobelt, 2013). This type of health economic evaluation includes preference-based outcome measures to quantify health effects (e.g., via the EQ5D-5L questionnaire adopted in our study, see below; Herdman, et al., 2011). The key metrics utilised to demonstrate the benefit will demonstrate impact on cost and outcomes (effect). To assess the cost-effectiveness of the interventions, The Centre built a Markov model (Kobelt, 2013) which includes the costs and outcomes for the average veteran captured across the study regions (see Table 4).

Target population	Veterans (mostly adult males).
Intervention	TSS programmes.
Comparator	No TSS programme.
Health outcomes	Health-Related Quality of adjusted Life years (QALYs); Healthcare related cost; Societal perspective cost

Table 4. Model Components

In this model, there was an estimate of costs and outcomes (QALYs, see below) associated with the programmes for veterans moving between five-health states, ranging from 'mild' to 'moderate', 'moderately-severe', 'severe', and finally 'model exit'. The model type is probabilistic (Kobelt, 2013) and incorporates the probability to transition between these five health states. The health states are based on the severity categories derived from the administered PHQ-9 scores (a standardised questionnaire screening for depression; Manea et al., 2015). The PHQ-9 produces five severity categories minimal (scores 1-4), mild (scores 5-9), moderate (scores 10-14), moderately-severe (scores 15-19), and severe (scores 20-27). However, for this evaluation and due to relatively low numbers of participants in the minimal and mild categories, these five severity categories were reduced to four categories (mild scores were those less than 10, moderate scores were those between 10-14, moderately severe between 15-19 and severe scores were those between 20-27) as applied in previous health economic studies of depression (see König et al., 2019; Rayner et al., 2016).

Health-related quality-adjusted life year (QALYs) is explicitly used as the primary measure of effect in cost-utility analysis, which considers both costs and benefits in terms of quantity (mortality) and quality (morbidity) of life from which 'cost per QALY' estimates are derived. By incorporating this framework, the UK healthcare system and NICE guidelines set a threshold to help decide which interventions should be funded and prioritised (National Institute for Health Care and Excellence (NICE), 2013). Health utility reflects the preference for a particular health outcome or health state measured via an interval scale, where 0 represents dead and 1 represents perfect health (Kobelt, 2013). Health utilities provide an understanding in relation to the measurement of health-related quality of life and cost; the cost-utility analysis represents the preference weights for quality adjustment within QALYs. Quality of life adjustment was assessed using the EQ5D-5L questionnaire (Herdman, et al., 2011). The EQ-5D descriptive system comprises of five dimensions; mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. Respondents self-report their health today on a 5-point scale (from no effect to severe effects). Scores were then mapped to the UK value sets, reflecting the utility-preferences of the UK general population, following guidance set out in the NICE reference case.

The societal perspective approach was adopted in addition to the healthcare system perspective. A societal perspective means all costs are included, such as healthcare costs (e.g., screening costs and treatment costs), and indirect costs such as lost productivity (e.g., activity impairment, time, and transportation costs). All unit costs are in British Pound Sterling, and Unit cost data and prices are sourced from a previous health economic study on depression (Rayner et al., 2016).

Incremental cost-effectiveness ratio (ICER) between respective groups (veteran 'treatment' arm vs veteran 'control' arm with no treatment or under usual treatment) is computed by dividing the incremental difference in costs by the incremental difference in health outcomes

attributable to the intervention (additional gains in QALY; Kobelt, 2013). Healthcare perspective cost was computed taking the total sum of intervention cost (cost of administering sessions) and non-intervention costs (cost of MH-associated services used that are not part of the intervention). Following HM Treasury Green Book guidelines; a 3.5% discount rate was used (Smith, 2021).

The cost-utility model concept was designed to adequately map health states associated with serious stress while maintaining the face validity of the design with medical practitioners and veterans. What is meant by this is that any additional complexity would come at a trade-off to the ability of the model to represent the current treatment landscape, but can be offset by an increase in the ability of the model to capture the differences in value across treatments or scenarios accurately. The model is represented in Figure 6.

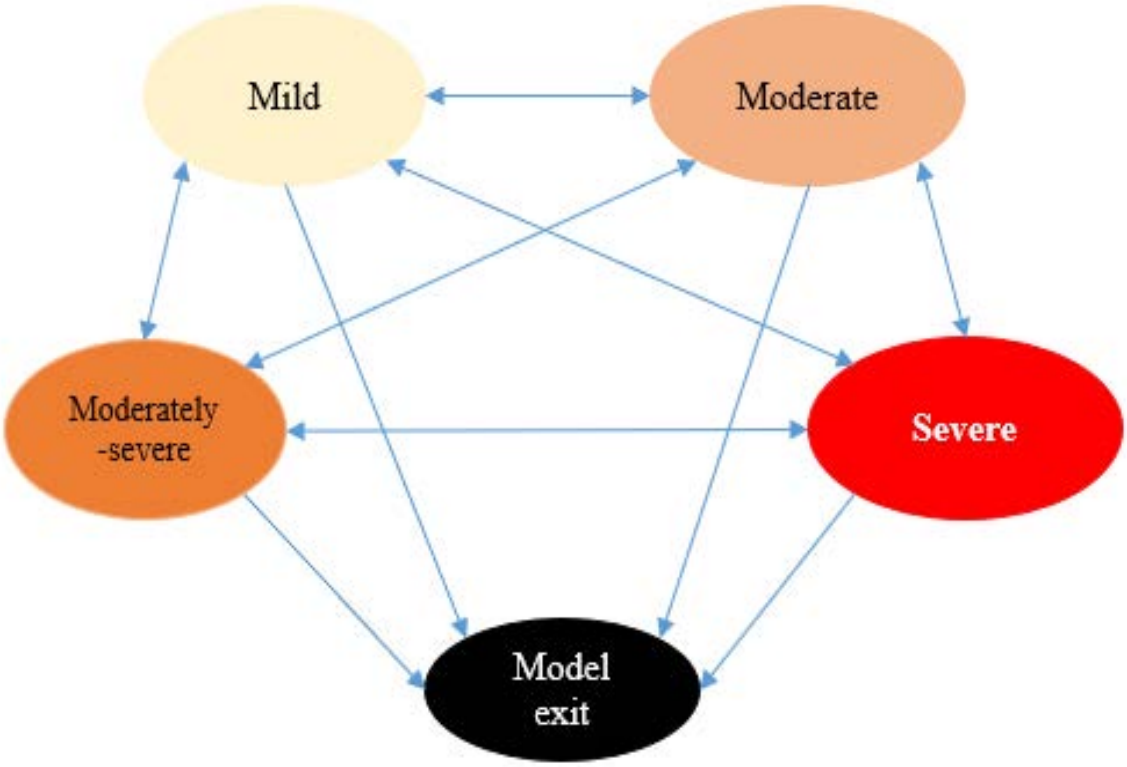


Figure 6. Model Concept

Transition probabilities (frequencies) for veterans to move between the five categories of severity derived from the PHQ-9 scores are reported in the results section. Results suggest that the intervention has been effective in moving participants from more severe states to less severe health states.

Costs

All unit costs are in British Pound Sterling, and Unit cost data and prices are sourced from a previous health economic study on depression and chronic pain (Rayner et al., 2016). Data is reported in Table 5

	UNIT	UNIT COST	SOURCE (Rayner et al., 2016)
GP	Cost per 11.7 min consultation (direct and qualification)	£46.00	Curtis 2014
Secondary/tertiary care	Mean cost per outpatient consultation	£135.00	NHS www.gov.uk/ government/publications/nhs-reference-costs-2013-to-2014.
A&E	Mean cost per accident and emergency attendance	£124.00	
Inpatient treatment	Mean cost per day hospitalised (regular or night)	£400.00	

£1000 per year for health care = Non-treatment group
£900 per year for health care = Treatment group

Cost was split into healthcare related costs and societal costs. Healthcare costs were calculated in the Rayner paper as a function of the above unit costs, and resource count data captured in patients with depression resulting from chronic pain. The study's outputs included a regression model that predicted the cost associated with various severity groups of the PHQ-9 tool, holding constant the effect of the chronic pain itself. This allowed us to include estimates of healthcare costs associated with various severity health states into the cost-utility model.

Societal cost was calculated using the cost to individual veterans and society, measured as earnings foregone as a result of unemployment. The employment rate was measured as the proportion of the relevant severity group who are in paid employment and was used to estimate productivity losses in the cost-utility model. A human capital approach was undertaken whereby lost earning through lack of employment were observed, in totality, as a cost to society.

Case Study 3: Inspire

The client witnessed several service-related incidents of traumatic loss of life through terrorist activity and near misses. Post service the client continues to reside in the vicinity where he witnessed the events. This compounded by ongoing sustained threats to his life, elicited hypervigilance, extreme social withdrawal -avoidance manifest by his rarely leaving the house and contributing to secondary low mood-anxiety and a confirmed diagnosis of PTSD.

He experienced formal talking therapies as unhelpful and wanted to disengage from the program. In advance of discharge, he was followed up by his Case Manager, with a background in Military Mental health. He tentatively disclosed he had not walked through Belfast since the late 90s because it triggered an overwhelming fear-based response, such that he was ashamedly resigned to self-imposed isolation as the only way to keep himself "safe" and avoid breaking down.

Having established a rapport, trust and psychoeducation on the nature of his debilitating symptoms he was gently persuaded and agreed to revisit three sites where he previously witnessed traumatic loss of life incidents. Introducing graded exposure and anxiety management techniques has seen him gradually break his hitherto terrifying associations with the past, separate the past from the present and witness normal everyday city scenes – activities, where he reports

"***I never thought I could stand here again"***

"It's not live (referring to historic incidents of trauma), it's just memories now"

"I look around here (Site A) the streets look wider now…. it's like time travel"

Over the course of seven weeks the client reports his anxiety is halved corroborated by a subjective units of distress scores. Although unavoidably the work has been temporarily interrupted because of COVID 19, regular telephone contact indicated stability and progress made have been sustained, where the client is gradually re-engaging with life and the living.

Results

The evaluation was conducted between May 2019 and the 1st of September 2021.

Questionnaires

There were 970 participants who entered the TSS programme. Of these, 613 received an entry questionnaire of which 546 were completed giving a completion rate of 89%. Feedback from grant holders indicated that over 200 participants were children who were not included in the evaluation, and 133 refused to complete a questionnaire. There were 280 participants who received an exit questionnaire of which 254 completed given a completion rate of 91%. In addition to the reasons above, clients had disengaged and many were still involved in grant holder activities. See Table 6.

			ENTRY QUESTIONNAIRES			EXIT QUESTIONNAIRES		
Ser	**Grant Holder**	**Participants**	**Distributed**	**Completed**	**Response Rate (%)**	**Distributed**	**Completed**	**Response Rate (%)**
1	V1P	109	50	33	**66**	10	7	**70**
2	Inspire	206	151	151	**100**	104	100	**96**
3	Ely Centre	129	69	44	**64**	20	17	**85**
4	CAIS	109	93	84	**90**	44	40	**91**
5	Wigan	126	125	122	**98**	44	44	**100**
6	WWTW	170	75	73	**97**	33	28	**85**
7	Solent	121	50	39	**78**	25	18	**72**
8	**TOTAL**	**970**	**613**	**546**	**89**	**280**	**254**	**91**

Table 6. Questionnaire Completion Rates

The 800 completed questionnaires consisted of 546 Entry questionnaires (448 from veterans and 98 from family members) and 254 Exit questionnaires (215 from veterans and 39 from family members). 50.2% (N=402) completed paper questionnaires, and 49.8% (N=398) of participants completed online versions. Table 7.

	Grant Holders	Entry Questionnaires		Exit Questionnaires	
Ser		**Veterans**	**Family**	**Veterans**	**Family**
1	Veterans 1st Point	24	9	4	3
2	Inspire	111	40	77	23
3	Ely Centre	35	9	15	2
4	CAIS	81	3	37	3
5	Wigan	105	17	42	2
6	WWTW	56	17	24	4
7	Solent NHS Trust	36	3	16	2
8	*Total 800*	*448*	*98*	*215*	*39*

Table 7. Received Questionnaires Separated by Grant Holder

The number of participants recruited by each grant holder is in Table 8. Large parts of the project was conducted during the Covid-19 pandemic when recruitment reduced as grant holders modified their programmes to address the emerging issues such as lockdown. As a result, grant holders modified their programmes. The average monthly intake is in Table 8 and quarterly uptake is in Figure 7 and Table 9 .

Serial	Grant Holder	Total Number of Participants Recruited	The average number of participants recruited per month (over 26 months)
1	Veterans 1st Point	33	1
2	Inspire	151	6
3	Ely Centre	44	2
4	CAIS	84	3
5	Wigan	122	5
6	WWTW	73	3
7	Solent NHS Trust	29	1

Table 1. Average Participant Uptake by each Grant Holder per month

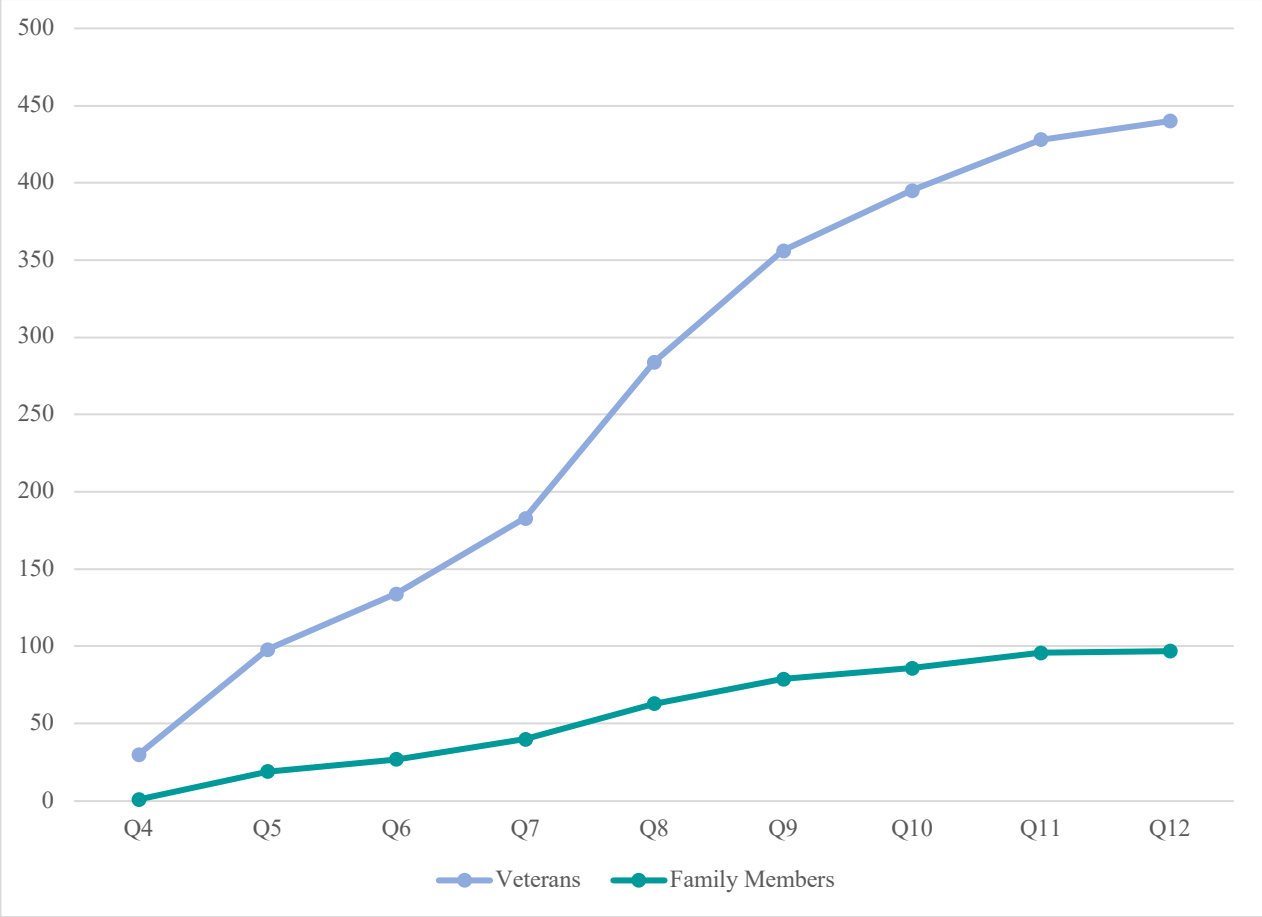
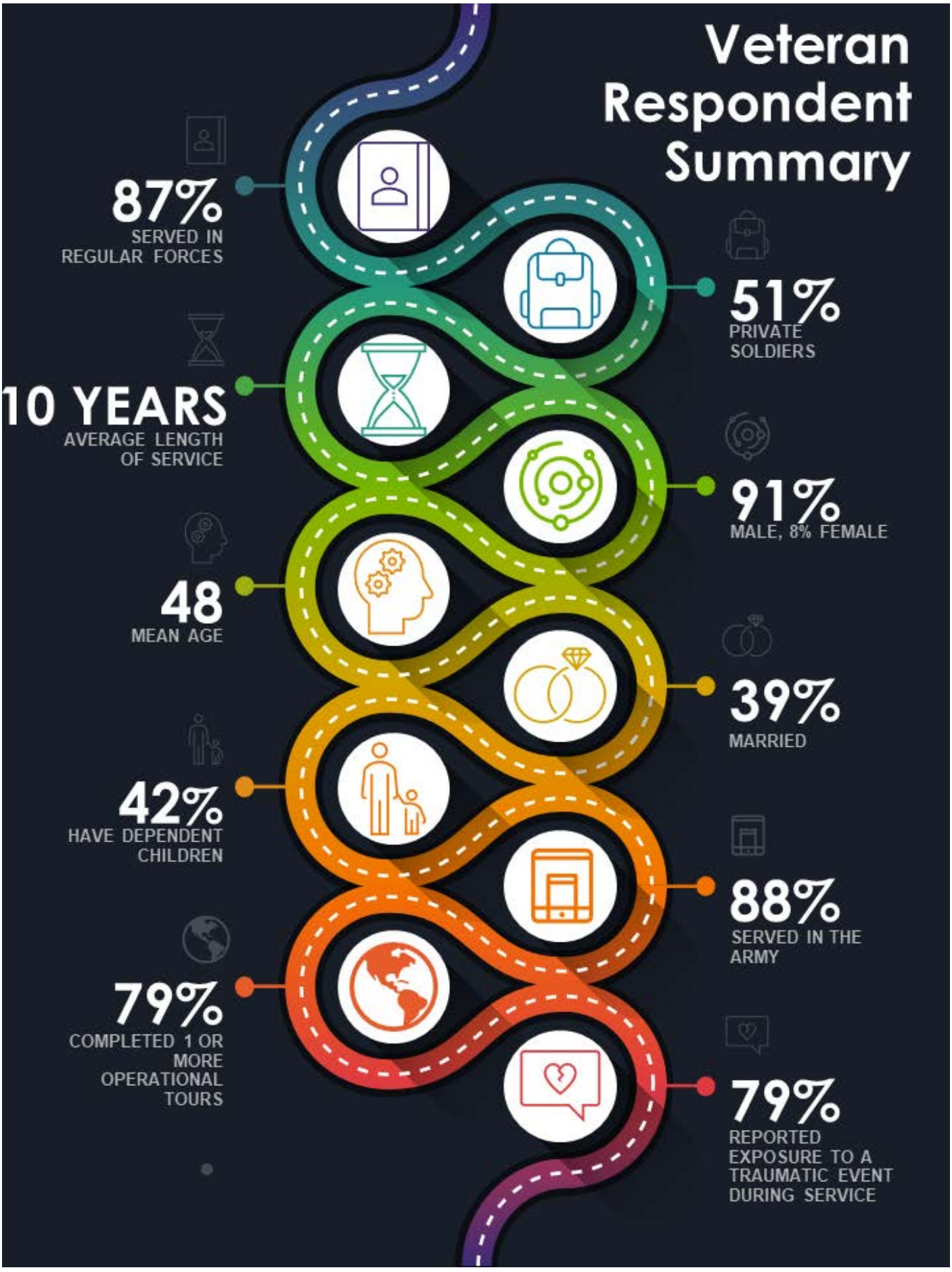


FIGURE 7. PARTICIPANT ENTRY UPTAKE THROUGHOUT THE STUDY

Grant Holder	Beneficiaries	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Quarter 9	Quarter 10	Quarter 11	Quarter 12	Final Report
Dates					**August 2019**	**November 2019**	**February 2020**	**May 2020**	**August 2020**	**November 2020**	**February 2021**	**May 2021**	**August 2021**	
Veterans 1st Point	Veterans	/			/	/	/	/	/	9	15	17	18	24
	Family Members				/	/	/	1	1	2	8	8	8	9
Inspire	Veterans	/			3	16	23	45	75	89	101	112	111	111
	Family Members				/	3	6	12	24	34	35	40	40	40
Ely Centre	Veterans	/			/	20	20	25	27	30	32	32	34	35
	Family Members				/	6	6	6	6	7	8	8	9	9
CAIS	Veterans	/			11	16	24	28	54	63	68	73	80	81
	Family Members				/	/	3	3	2	2	2	3	3	3
Wigan	Veterans	/			14	41	59	62	78	93	93	104	105	105
	Family Members				1	7	8	8	13	15	13	17	17	17
WWTW	Veterans	/			2	5	8	20	38	47	52	55	56	56
	Family Members				/	3	4	10	16	17	17	17	17	17
Solent NHS Trust	Veterans	/			/	/	/	3	12	25	34	35	36	36
	Family Members				/	/	/	/	1	2	3	3	3	3
Totals					**31**	**117**	**161**	**223**	**347**	**435**	**481**	**524**	**537**	**546**

Table 2. Participant uptake by Grant Holders throughout the study

Demographic Information



Tackling Serious Stress

Family & Carers Demographics

54% Spouse or Partner of Veteran

29% Children of Veteran

9% Parent of Veteran

49% Married

74% Female

Male 24%

17% in a Primary Carer role for the veteran.

12% in a Supportive Carer role for the veteran.

71% do not undertake a carer role with the veteran.

67% of those in a Carer role receive no form of funding. Just 7% do.

Age, Gender and Sexual Orientation

The mean age of veterans was 48 years, and family members was 44 years. See Figure 8. Age group differences were shown in participants between the seven grant holders, with younger participants in the northwest of England (Wigan and WWTW) and older participants in Northern Ireland (Inspire and the Ely Centre). See Table 10.

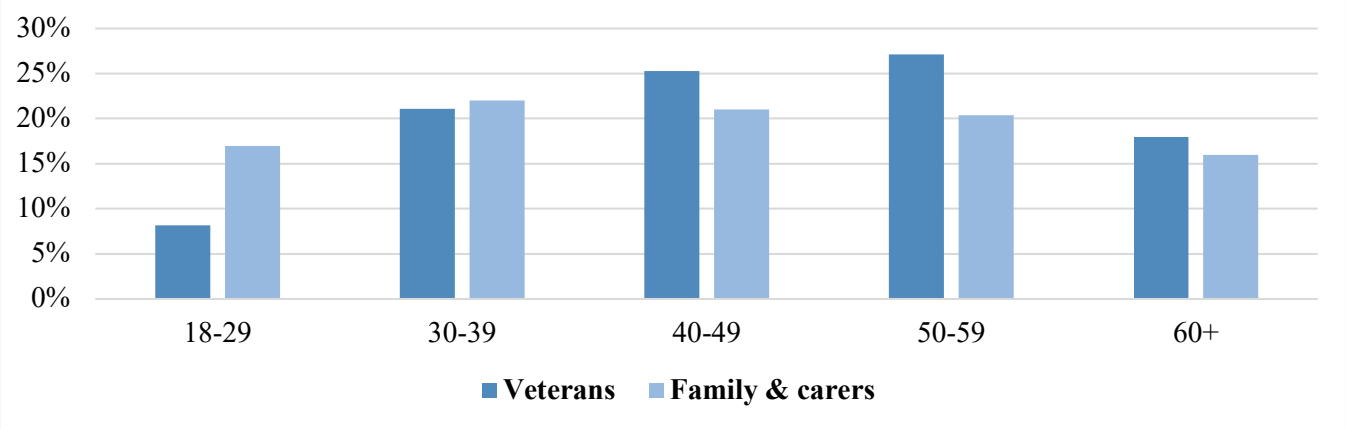


Figure 8. Age of Participants

Veteran participants were predominately male (91%, N = 409) with females totalling 8% (N = 36; missing data N = 3). In the family group, 74% (N = 73) were female, and 24% (N=24) were males, with missing data being 1. Details per grant holder are in Table 10. Veterans' sexual orientation was predominately heterosexual at 94% (N = 421), as was the family members group at 89% (N = 87).[2]

Serial	Grant Holder	Mean Age	Range	Male ♂	Female ♀
1	Veterans 1st Point	44	28-69	21 (88%)	3 (12%)
2		45	32-57	1 (12%)	7(88%)
3	Inspire	54	24-83	103 (93%)	8 (7%)
4		45	17-73	12 (30%)	28 (70%)
5	Ely Centre	56	43-78	31 (89%)	4 (11%)
6		53	45-65	3 (37%)	5 (63%)
6	CAIS	48	27-76	76 (95%)	4 (5%)
7		47	32-66	/	3 (100%)
8	Wigan Council	42	20-73	97 (92%)	8 (8%)
9		38	17-60	3 (18%)	14 (82%)
10	WWTW	42	22-67	50 (93%)	4 (7%)
11		42	19-82	4 (24%)	13 (76%)
12	Solent NHS Trust	49	26-73	31 (86%)	5 (14%)
13		45	39-48	1 (33%)	2 (67%)
14	TOT Veterans	48	20-83	409 (92%)	36 (8%)
15	TOT Fam/C.	43	17-82	24(25%)	73 (75%)
16	**Dark Blue** Veterans / **Light Blue** Family				

Table 10. Age and Gender by Grant Holders

[2] Full detail for all results are available on request from the Centre.

Relationship Status and Children

The most common relationship status in veterans were married (39%, N = 176), followed by single (35%, N = 155). Similarly, the most common relationship status for family members was married 48% (N = 47), followed by single (16%, N = 16). See Table 11.

Grant Holder	Single	Married	Divorced	Separated	In a relationship	Civil Partnership	Widower	Other
Veterans 1st Point	6 (25%)	12 (50%)	3 (13%)	1 (4%)	2 (8%)	/	/	/
	/	5 (56%)	/	3 (33%)	/	/	/	/
Inspire	23 (21%)	62 (56%)	5 (5%)	9 (8%)	4 (4%)	5 (5%)	2 (2%)	1 (1%)
	9 (23%)	15 (38%)	3 (8%)	1 (3%)	4 (10%)	3 (8%)	4 (10%)	/
Ely Centre	3 (9%)	26 (74%)	2 (6%)	/	1 (3%)	2 (6%)	1 (3%)	/
	1 (11%)	7 (78%)	/	/	/	/	/	/
CAIS	26 (32%)	28 (35%)	10 (12%)	2 (2%)	4 (5%)	8 (10%)	/	2 (2%)
	1 (33%)	1 (33%)	/	/	1 (33%)	/	/	/
Wigan	53 (50%)	22 (21%)	8 (8%)	5 (5%)	10 (10%)	6 (6%)	1 (1%)	/
	4 (24%)	9 (53%)	/	/	3 (18%)	1 (6%)	/	/
WWTW	31 (55%)	8 (14%)	5 (9%)	4 (7%)	4 (7%)	3 (5%)	/	/
	1 (6%)	9 (53%)	/	1 (6%)	2 (12%)	2 (12%)	1 (6%)	1 (6%)
Solent NHS Trust	13 (36%)	18 (50%)	3 (8%)	1 (3%)	1 (3%)	/	/	/
	/	1 (33%)	/	/	2 (67%)	/	/	/
TOT Veterans	155 (35%)	176 (39%)	36 (8%)	22 (5%)	26 (6%)	24 (5%)	4 (1%)	3 (1%)
TOT Fam/C.	16 (16%)	47 (48%)	3 (3%)	5 (5%)	12 (12%)	6 (6%)	5 (5%)	1 (1%)
Teal Veterans / **Light Blue** Family								

Table 11. Relationship Status by Grant Holders

The majority of veterans had no children (57%, N = 256). Those who preferred not to say were 1% (N = 4). Similarly, most family members had no dependent children 42% (N = 41).

For those veterans who had dependent children (42%, N=186), the mean age was 11 years (ranging from 1 to 28 years of age). Those living with the veteran were 22% (N = 100). Additionally, 32% (N=143) of these veterans reported providing regular financial support for all their children. For those family members who had dependent children (41%, N = 40), the mean age was 11 years (ranging from 2 to 24). Most of their dependent children lived with them (37%, N = 36), Thirty-seven participants provided regular financial support for all their children (38%).

Ethnic Background and Religion

Veterans were 95% (N = 425) white British, 3 were white Irish, 3 were African, 4 were mixed background, one was Asian British, West Indian, and Nepalese. Two participants selected preferred not to say, and 8 participants did not answer this question. In the family members group, 81% (N = 79) were white British, one was white Irish and Asian British, with one participant selecting prefer not to say, and 16 participants did not answer this question.

440 veterans answered the question on religious identification and they were mostly Christian (60%, N = 258). Thirty percent (N = 131) had no religion, 6% (N = 24) had 'other' religions, 4% (N = 19) selected 'prefer not to say' as an answer, and 8 were missing data. Similarly, in the family / carers group where 82 answered this question and 57% (N = 47) were Christian, 34% (N = 28) had no religion, 7% (N = 6) had 'other' religions, with 16 missing data.

Family and Carer Specific

Of the 94 family members who answered this question, 54% (N = 51) were spouses or partners of veterans, 29% (N = 27) were children of veterans, 9% (N = 8) were a parent of a veteran, 7% (N = 7) answered other, and 1% (N = 1) had no relationship with the veteran and 4 were missing data. In this group, 71% (N = 68) had no carer role towards the veteran, whereas 17% (N = 16) had a primary carer role, and 12% (N = 12) had a supportive carer role, and two were missing data. Forty three participants then completed the survey to indicate that 67% (N = 29) were not funded, only 7% (N = 3) had funding for their role. Additionally, from a total of 84 who answered this question, 45% (N = 38) in the family members group were living with the veteran, whereas 49% (N = 41) were not living with them (two selected prefer not to say, three answered not applicable, and 14 were missing data).

Service History

Rank, Length of Service, Exposure to Traumatic Events and Reason for Discharge

Veteran participants were predominately from the Army 89% (N = 391), with Royal Navy at 6% (N = 28), RAF 3% (N = 15), Royal Marines 1% (N = 6), others were 1% (N = 5) and missing

data was N = 3. Of these, those who served in the Regular service were 88% (N = 390), Reserves / Territorial Army were 9% (N = 40), and others were 2% (N = 11). Missing data were N=7. Significant differences were shown between the seven grant holders. This is in line with expectations as there are regional differences between areas of service. Details per grant holder are in Table 12.

Serial	Grant Holder	Army	Royal Navy	RAF	Royal Marines	Others
1	Veterans 1st Point	20 (83%)	1 (4%)	3 (13%)	/	/
2	Inspire	103 (93%)	2 (2%)	4 (4%)	/	1 (1%)
3	Ely Centre	34 (97%)	/	/	/	/
4	CAIS	74 (91%)	2 (2%)	3 (4%)	1 (1%)	1 (1%)
5	Wigan	94 (90%)	4 (4%)	3 (3%)	2 (2%)	2 (2%)
6	WWTW	48 (86%)	4 (7%)	1 (2%)	2 (4%)	/
7	Solent NHS Trust	18 (50%)	15 (42%)	1 (3%)	1 (3%)	1 (3%)
8	TOTAL	391 (87%)	28 (6%)	15 (3%)	6 (1%)	5 (1%)

Table 12. Service by Grant Holders

Veterans were predominately Private soldiers or equivalent when they left the Armed Forces (51%, N = 227). The mean years of length of service in the Armed Forces was 10 years (N = 441; 98%, median = 8; mode = 5; SD = 8; range 1 to 37 years).

Operational Tour Profile

Of the 441 participants who answered this question, the majority (79%, N = 349) conducted operational tours (OT) and 21% (N = 92) did not (missing data N = 7). The mean was two operations per veteran (median = 1; mode = 1; SD = 2; range 1 to 11 OT). From the sample of 448 participants, the most common OT was in Northern Ireland at 47% (N=212), followed by Iraq 21% (N=95), Afghanistan 17% (N=76), Balkans 15% (N=65), Falkland 7% (N=30), Sierra Leone 2% (N=10), and other 17% (N=76). OT were not mutually exclusive.

Veteran Trauma related to Military Service

Those veterans reporting exposure to a traumatic event during their service were 79% (N = 353), with a mean of two events (median = 1; mode = 1; SD = 1.26; range 1 to 5 traumas).

Traumatic events (which are not mutually exclusive) were mostly reported as being Conflict/ Contact situations 60% (N = 270), followed by personal attack 35% (N = 158), abuse 27% (N = 119), and accidents 24% (N = 108) (See Figure 9). The mean rating of the most traumatic event reported was graded at nine; ranging from 0 (minimum distress) to 10 (maximum distress).

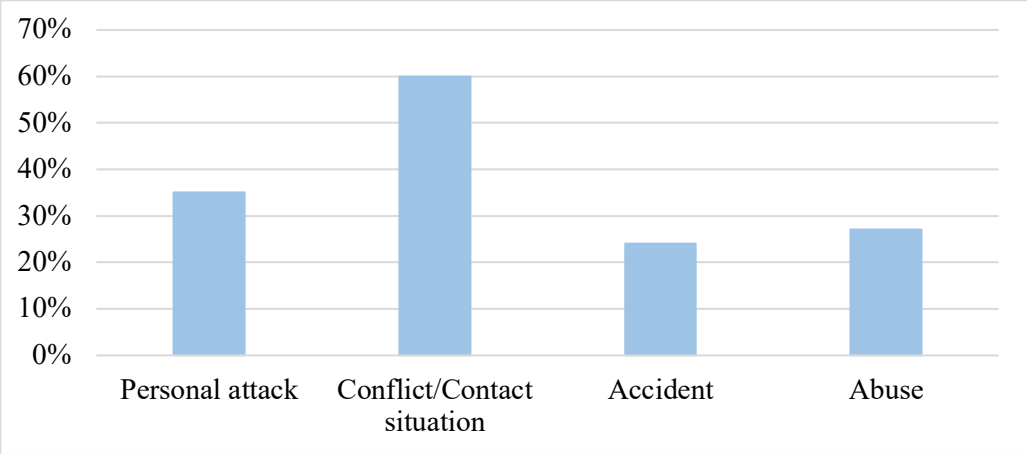


Figure 9. Type of Traumatic Events Experienced by Veterans During Service

Sixty three veterans provided extra written detail describing their exposure to traumatic events, which were primarily associated with combat situations (N=44). They cited exposure to explosions, shootings, helping casualties, and dead bodies: *"Enniskillen bomb on parade"*, *"Mass graves and body parts/dead bodies from firefights/explosions"*. The narrative gave insight into the detrimental impact on veterans' physical and MH, and the development of PTSD: In addition, veterans reported being exposed to verbal and physical abuse which included isolated cases of bullying from senior military personnel from local civilians where they had served *"My family and I had to move home due to being under terrorist threat (Northern Ireland)"*, *"two attempts on my life as a porter"*.

Veteran Reasons for Discharge

Of the 442 who gave a reason for leaving the Armed Forces, the most common reasons were 'end of the contract' (31%, N = 136) and 'medical discharges' at 30% (N = 132). This was primarily due to a combination of physical or MH problems (See Figure 10 and 11 for details).

Veterans provided further detail to support their reasons for leaving the Armed Forces (N=187). The physicality and exposure to traumatic scenes commonly experienced by military personnel led to physical and MH issues. With regards to physical health, veterans predominantly described musculoskeletal injuries (N=42). *"Injuries, back, legs, knee, foot"*, *"Back Injury"*, *"Damaged knees"*, *"Hip Damage"*. Ten respondents provided written notes on the

onset or diagnosis of PTSD and how this led to their discharge. Participants left the Armed Forces due to personal reasons (N=47), such as lack of motivation or issues related to their family and friends: *"Family illness", "Left for my ex-partner", "Close attack on personal friend made me re-think things"*. *"Married husband's regiment moved to X"*, Twenty veterans reported issues that were beyond their control such as Regiments / Battalions being split *"disbanded UDR"* leading to compulsory redundancy. Some were unable to cope or felt unsupported, and cited constant operational tours. The use of recreational drugs, alcohol misuse and court-martial provided further insights concerning misconduct (N=10): *"Alcohol problem due to a traumatic event", "Court marshalled"*. A small number cited (N=6) verbal mistreatment *"Racially abused and treated unfairly"*.

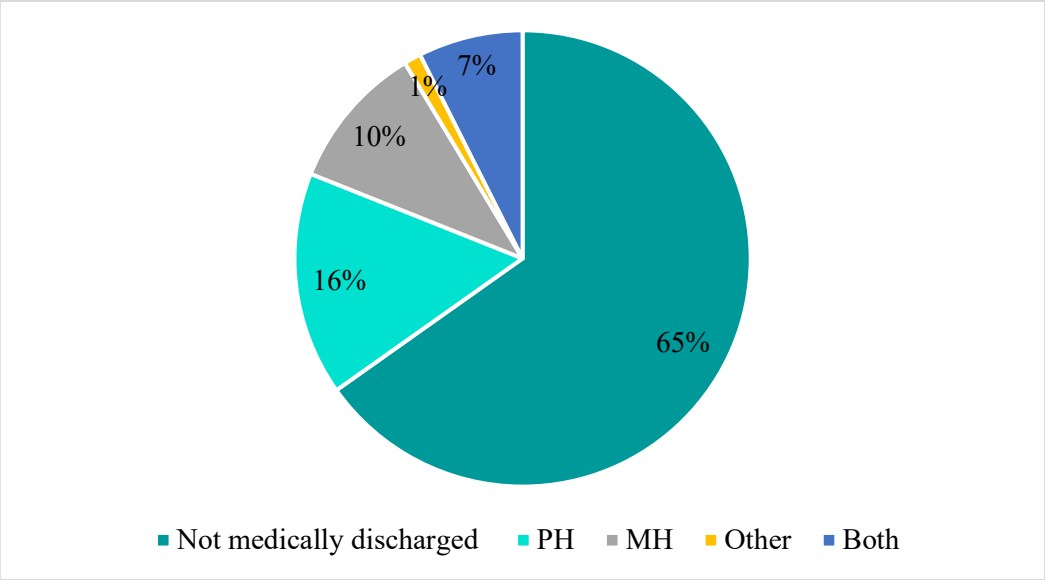


Figure 10. Reasons for Discharge

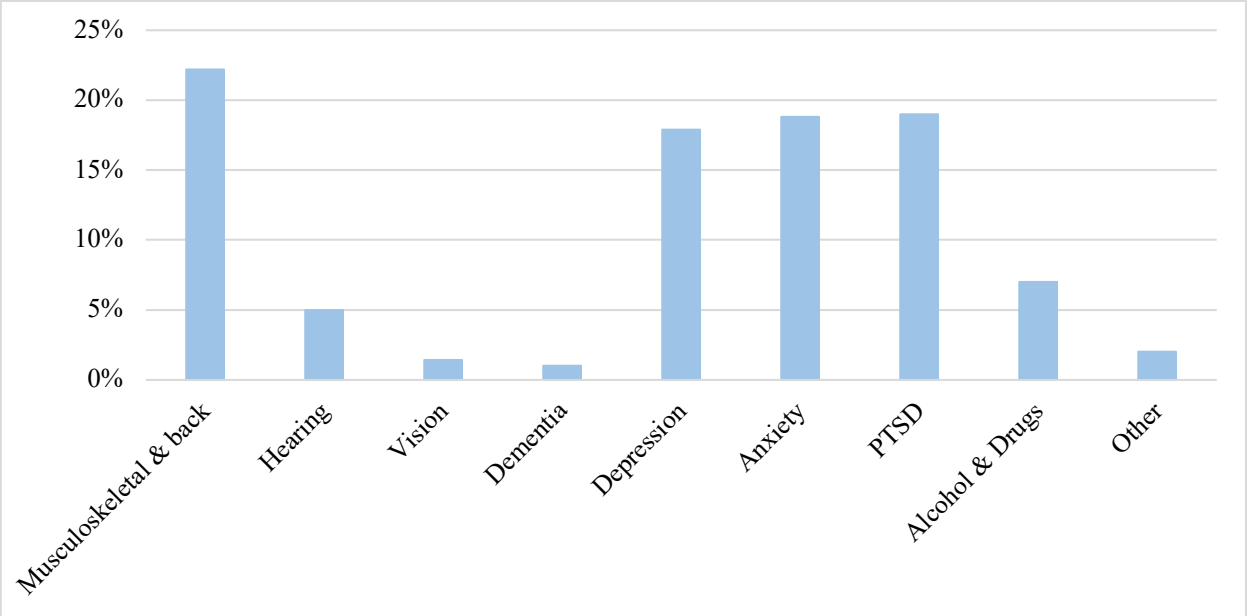


Figure 11. Veterans Medical Discharge

Physical and Mental Health

The veteran participants who self-reported long standing physical or MH problems were 79% (N = 353) and family members were 62% (N = 61). Veterans reported being affected by an average of 3 illnesses (medium 3; mode 1; SD 1.74; range 1 to 9) , whereas family members reported being affected by an average of 2 illnesses (median = 2; mode = 3; SD = 1.61; range 1 to 7 illnesses). In both groups, the most common being depression (veterans: N

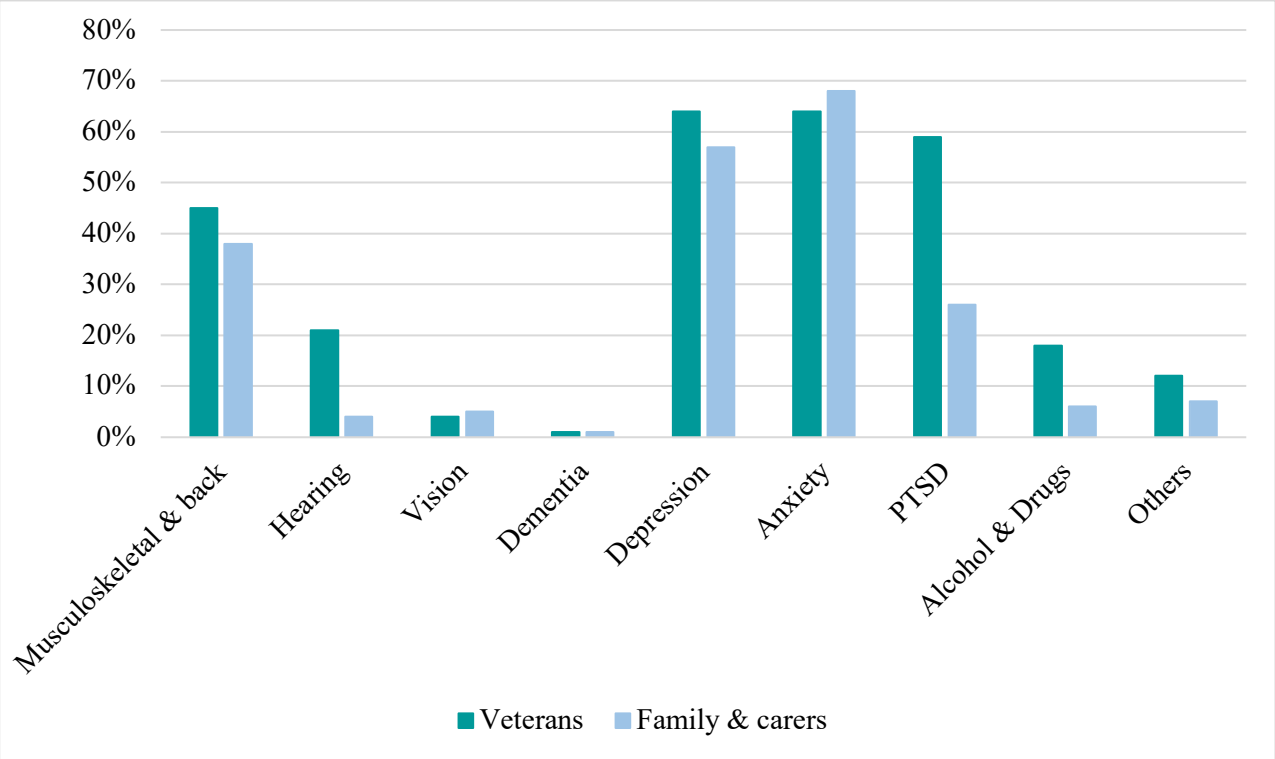


Figure 12. Types of Issues or Illnesses Affecting Participants

= 288, 67%; family: N = 56, 57%), anxiety (veterans: N = 287, 67%; family: N = 67, 68%), PTSD (veterans: N = 266, 62%; family: N = 25, 26%), and musculoskeletal/back problems (veterans: N = 203, 47%; family: N = 36, 37%). See Figure 12.

Following exit of the TSS programmes, 82% (N=177) of veterans reported long-standing physical or MH problems with the number indicating a reduction from 3.06 to 2.80, with a range of 1 to 8 reported illnesses. There were decreases in terms of self-reported depression, anxiety and alcohol and drug use. Participants also reported a reduction in hearing problems; although the evaluators are unsure why. A clearer reduction in alcohol abuse, depression, anxiety were visible from the validated psychometric questionnaires which are detailed below.

Statistical correlations were observed between age and the number of reported physical and mental illnesses, indicating that older veterans reported more physical and mental illnesses than younger veterans. In addition, correlations between age and musculoskeletal problems

indicated that older veterans reported more musculoskeletal problems than younger veterans. Correlations were found between the self-reported VAS levels of stress (low, medium, high) and the number of reported physical and MH problems, indicating that veterans who reported high-stress levels reported more physical and MH illnesses. Analysis of veterans' commonly reported MH illnesses showed significant differences between grant holders ($X_2(30) = 87.31$, $p = 0.00$). Details per grant holder are in Table 13. Illnesses were not mutually exclusive.

Serial	Grant Holder	Muscular & back	Hearing	Depression	Anxiety	PTSD	Alcohol & Drugs
1	Veterans 1st Point	3 (13%)	/	8 (33%)	8 (33%)	10 (42%)	6 (25%)
2		/	/	2 (22%)	3 (33%)	/	1 (11%)
3	Inspire	65 (59%)	37 (33%)	82 (74%)	77 (69%)	84 (76%)	19 (17%)
4		23 (58%)	2 (5%)	27 (68%)	33 (83%)	14 (35%)	4 (10%)
5	Ely Centre	28 (80%)	13 (37%)	22 (63%)	23 (66%)	20 (57%)	5 (14%)
6		6 (67%)	2 (22%)	4 (44%)	8 (89%)	3 (33%)	1 (11%)
7	CAIS	29 (36%)	17 (21%)	57 (70%)	53 (65%)	60 (74%)	16 (20%)
8		/	/	2 (67%)	1 (33%)	/	/
9	Wigan	39 (37%)	15 (14%)	56 (53%)	62 (59%)	44 (42%)	24 (23%)
10		3 (18%)	/	11 (65%)	12 (71%)	4 (24%)	/
11	WWTW	30 (54%)	9 (16%)	43 (77%)	45 (80%)	35 (63%)	11 (20%)
12		4 (24%)	/	7 (41%)	7 (41%)	2 (12%)	/
13	Solent NHS Trust	9 (25%)	3 (8%)	20 (56%)	19 (53%)	13 (36%)	/
14		1 (33%)	/	3 (100%)	3 (100%)	2 (66%)	/
15	TOT Veterans	203 (47%)	94 (21%)	288 (64%)	287 (64%)	266 (59%)	81 (18%)
16	TOT Fam/C.	37 (38%)	4 (4%)	56 (57%)	67 (68%)	25 (26%)	6 (6%)
17	**Dark Blue** Veterans / **Light Blue** Family						

Table 13. Self-reported Illnesses by Grant Holders at Entry

Overall, significant changes were observed following programme exit, with veterans and family members self-reporting fewer illnesses (t (195) = 3.33, p = .01). Participants provided further information regarding physical or MH problems with written comments. For example, 117 participants reported on their physical illnesses, in particular musculoskeletal and pain such as : *"multiple chronic pain injuries"*, and chronic diseases and conditions (N=14): *"Diabetes, high blood pressure"*. There were also 81 who provided detail on their MH problems including: *"Complex PTSD"*, *" Diagnosed with a borderline personality disorder", "social anxiety"* and the associated impact *"Lack of self-esteem/confidence*. There were 14 veterans and family members who reported the use of recreational drugs and alcohol misuse to help them cope. However, participants did not provide any further insights regarding the motives for recreational drug abuse or alcohol misuse.

Case Study 4: Veterans 1st Point Scotland.

JK served with the Black Watch from 1997-2004 and was deployed to Iraq in 2003. Originally from Dundee JK moved to Kirriemuir to be closer to his ex-partner Linda and two girls, Mia 13 and Madison 16.

While receiving help from V1P Tayside (one of the Live Life partners) it was suggested that Mediation may help with some of the issue s that were going on within the family and interrupting JK progress. Cyrenians contacted JK on the 10th of January 2020 to discuss how they could be of help and to get some more back-ground information. On the 14th of January 2020 Cyrenians met with JK and his family at the V1P centre and discussed a way of moving forward that would suite everyone.

On the 14th of January 2020 Cyrenians met with JK and his family at the V1P centre and discussed a way of moving forward that would suite everyone. Both parents feel that they have had a hard time as a family due to their split, dads drinking and anger, mum's health issues (Bipolar and drinking). Mia is on autistic spectrum and Madison has ADHD. Parents stay is separate accommodation. The girls stay with Linda during the week and with JK at the weekends. This does not happen all the times as the girls go and see their dad when they fall out with their mum.

24/01/2020 Pre-Mediation JK His issues: working through his emotions with V1P and has not drank for 6 months. Linda sometimes goes on benders and just disappears for periods of time. When she moved into her new house she moved in her new partner and did not consult the girls. He thinks she can be a bit over the top with the girls and sometimes makes much more of things than she should. He worries about his daughters and the environment they have created for them.

27/01/2020 Pre-Mediation with Linda her issues: She is annoyed that social work allowed the girls to stay with their dad. She thinks James should be over what happened in the past by now as it was a long time ago. She feels Madison struggles in school due to ADHD but uses it as an excuse for her bad behaviour. She thinks Madison's older friends are Pedos and hates seeing her smoking cannabis and coming home drunk.

19/02/2020 Meeting with the whole family. Paul Mediator and Stephen family outreach worker and art therapist. Tension was a bit high so Paul said mediation doesn't work very well when people try to force each other to do things but is better when we focus on rebuilding connections and closeness. If we can do that often-giving parental input can be easier. All member of the family agreed to listen to each other and not judge and then were given space and time to explain their feelings and thoughts. At the end agreement was made to meet again and work on what had been discussed.

Due to Lock down, sessions continued with zoom and great progress was made. Linda sent this: *"I feel like this is a sad time to finish up. I would like to take this opportunity to thank you both for such an amazing opportunity and that you were both fantastic support. This opportunity should now be passed on to another family in need. Your input has been invaluable, and I hope that we can continue to grow with the tools you both provided us in order to communicate more effectively. Thank you ever so much again, I appreciate it greatly."*

Predisposing Factors and Symptoms

The majority of participants (veterans and family members) self-reported high levels of stress. Veteran participants reported a medium grade of 8 on a scale ranging from 0 (no stress) to 10 (maximum stress).

Serial	Factors	Veterans				Family Members			
		Entry (N=448)		Exit (N=215)		Entry (N=98)		Exit (N=39)	
		N	%	N	%	N	%	N	%
1	Family Stress	244	54	77	36	79	81	12	31
2	Prev. Unresolved trauma	243	54	91	42	47	48	7	18
3	Traumatic Exposure	240	54	76	35	39	40	4	10
4	Isolation	158	35	48	22	25	26	/	/
5	Relationship Problems	157	35	43	20	47	48	5	13
6	Operational factors	140	31	30	14	10	10	2	5
7	Finance	131	29	38	18	20	20	4	10
8	Occupational Stress	124	28	22	10	17	17	5	13
9	Alcohol/Substance Abuse	120	27	21	10	16	16	1	3
10	Physical Problems	120	27	62	29	17	17	7	18
11	Unemployment	111	25	34	16	15	15	1	3
12	Accommodation	87	19	20	9	1	1	3	8
13	Childhood Factors	83	19	27	13	26	27	1	3
14	Past Family History	79	18	25	12	30	31	3	8
15	Cultural	34	8	8	4	6	6	/	/
16	Legal	34	8	11	5	3	3	0	0
17	Other	12	3	8	4	/	/	1	3
18	Bullying	9	2	1	0.5	0	0	0	0
19	Dementia	3	7	/	/	/	/	/	/

Table 14. Self-reported Factors at Entry and Exit by Participants

Predisposing Factors: A mean of 5 predisposing factors were reported by veterans with a range of 0 to 16 factors (median = 5; mode = 3; SD = 2.93), whereas 4 predisposing factors with a range of 0 to 12 factors (median = 4; mode = 4; SD = 2.61), were reported by family members.
The most common factors being: family stress (veterans: N = 244, 54%; family: N = 79, 81%), previous unresolved trauma (veterans: N = 243, 54%; family: N = 47, 48%), traumatic exposure (veterans: N = 240, 54%; family: N = 39, 40%), relationship problems (veterans: N = 157, 35%; family: N = 47, 48%), and isolation (veterans: N = 158, 35%; family: N = 25, 26%). Exit details showed notable reductions in all areas except for physical issues in veterans and family members. Detail of the pre and post reported factors are in Table 14 and Figure 13 for veterans and Figure 14 for family member.

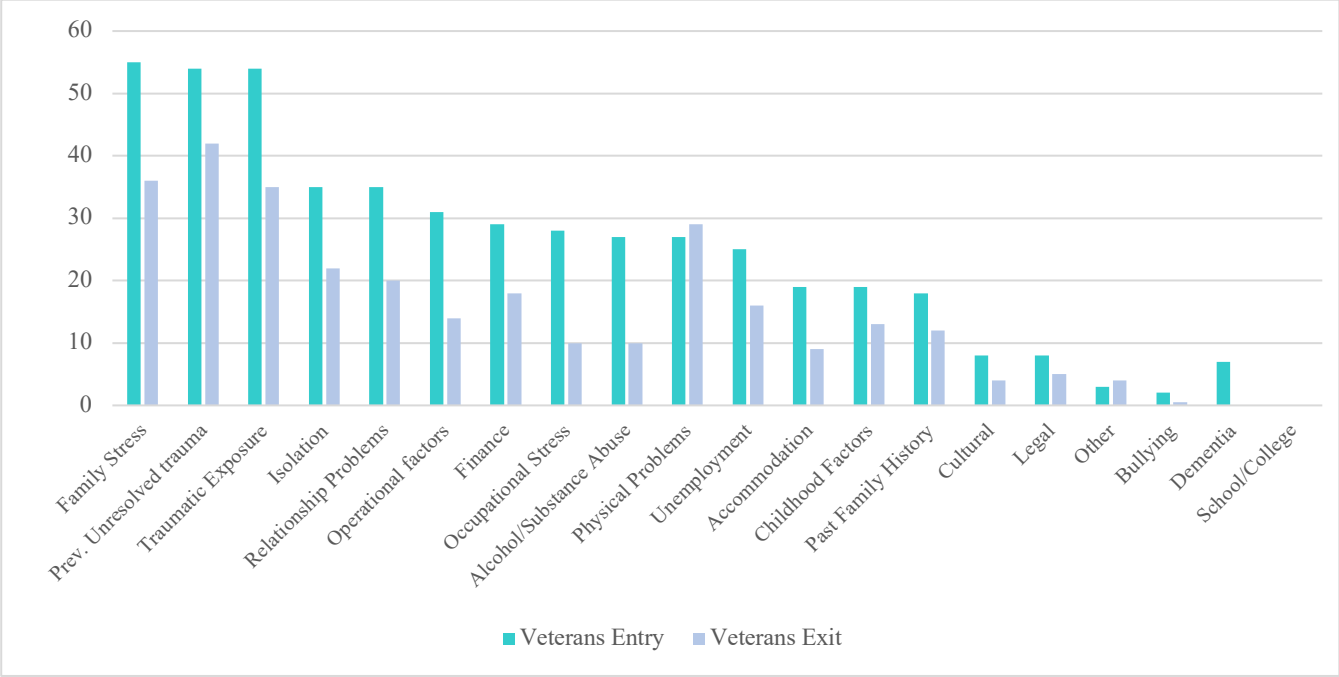


Figure 13. Number of Reported Factors by Veterans and Entry and Exit.

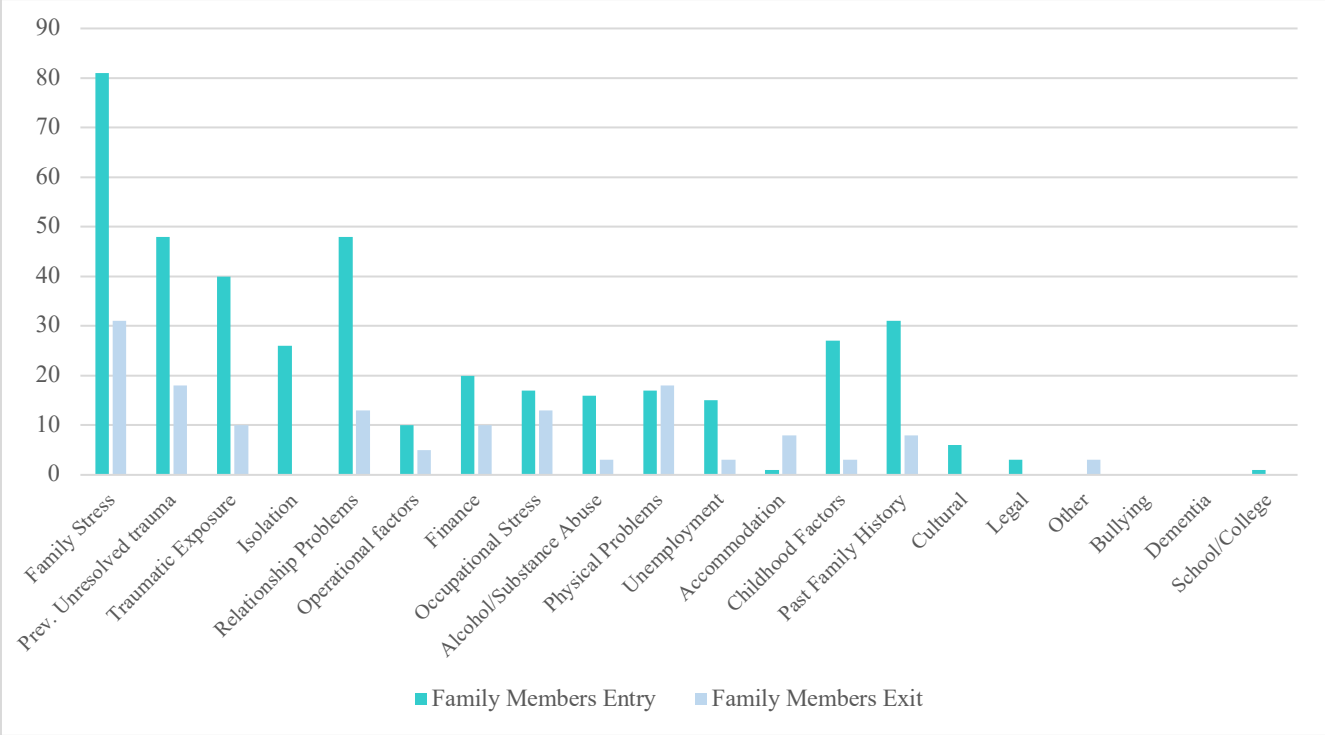


Figure 14. Number of Reported Factors by Family Members at Entry and Exit.

No statistical correlations were observed between the gender or age of veterans and the number of reported predisposing factors. However, older veterans were more predisposed to factors related to operational factors, previous unresolved trauma, relationship problems and alcohol/drug abuse compared to younger veterans. With regards to gender, correlations were found between male veterans and specific predisposing factors, with them reporting higher stressors related to operational factors. With regards to self-reported VAS levels of stress, correlations were found between the self-reported VAS levels of stress (low, medium, high) and the number of reported predisposing factors. Veterans who reported high stress levels reported more predisposing factors compared to veterans who were less stressed.

Following exit of the TSS programmes, the average number of reported factors by veterans had fallen from 5 to 3, with a range of 0 to 12 reported factors (median = 2; mode = 1; SD = 2.67) (Table 15). Similarly, for family members, the average number of reported factors had fallen from 4 to 2.93, with a range of 0 to 6 reported factors (median = 1; mode = 1; SD = 1.35) (Table 15). What was also clear was the accumulative presence of situational stressors. On entry 3% had reported no factors but this had risen to 16% by exit from the programme. These incremental reductions would clearly make a significant improvement to the participant's wellbeing with results that demonstrate that the TSS interventions reduced the levels of situational stressors / factors (Table 15).

Factors		**Veterans**						**Family Members**					
		Entry (N=437)			**Exit (N=212)**			**Entry (N=96)**			**Exit (N=39)**		
Ser	**Factors**	**N**	**%**	**Total %**	**N**	**%**	**Total%**	**N**	**%**	**Total%**	**N**	**%**	**Total%**
0	**0**	13	3	3	33	16	16	2	2	2	10	26	26
1	**1**	43	10	13	40	19	35	12	12	14	13	33	59
2	**2**	42	10	23	38	18	53	14	15	29	9	23	82
3	**3**	65	15	38	26	12	65	13	13	42	4	10	92
4	**4**	48	11	49	19	9	74	16	17	59	2	5	97
5	**5**	58	13	62	22	10	84	10	10	69	/	/	
6	**6**	48	11	73	8	4	88	9	9	78	1	3	100
7	**7**	47	11	84	10	5	93	9	9	86	/	/	
8	**8**	23	5	89	4	2	95	4	4	90	/	/	
9	**9**	19	4	93	6	3	96	2	2	92	/	/	
10	**10**	17	4	97	3	1	97	4	4	94	/	/	
11	**11**	2	0.5	97.5	2	1	98	/	/		/	/	
12	**12**	4	0.9	98.4	1	0.5	98.5	1	1	95	/	/	
13	**13**	5	1.1	99.5	/	/		/	/		/	/	
14	**14**	1	0.2	99.7	/	/		/	/		/	/	
15	**15**	1	0.2	99.9	/	/		/	/		/	/	
16	**16**	1	0.2	100.1	/	/		/	/		/	/	

Table 15. Number of reported factors by veterans and family members following programme entry and exit.

Participants provided further details in written comments to support their answers that best-described the factors that contributed to participants accessing *TSS programmes*. Of these, 102 participants described physical health problems of which 55 were aligned to musculoskeletal problems and 12 to chronic diseases or conditions including cancer and diabetes. MH problems were described by 33 veterans and family members with the most common being stress related anxiety disorders (N=23). Small numbers referenced previous traumatic events, (N=8), childhood trauma (N=7), such as" "*Troop tent went up in flames and my close friend died. Survivors guilt*" and *"My trauma involve exposure to the effects of extreme violence and battlefield casualties both military and civilian. Not myself in combat with enemies," and "Bombings shootings, friends killed and injured plus one family member being killed in the 'Troubles'",* and *"child sexual assault." "* Examples of family stressors were "*The stress is from fitting in hospital visits, with work & family, + also worry about how my brother fits is another component, he requires help from my family + outside agencies",* Issues surrounding other situational stressors were low, although some insightful such as a veteran participant with financial problems: "*I am also in debt to the sum of £XXXXX.XX, which all began after I graduated and bar six months in 2014 when I was solvent again has been on my shoulder's ever since"* or being homeless "*Made homeless by my former partner."* The impact of verbal, emotional and physical abuse experienced by both veterans and family members were predisposing factors that contributed to participants' accessing the programme.

Seventy Five veterans and family members reported predisposing factors related to health following their exit of the *TSS programmes*. Of these 64 were related to physical health (N=64) including 29 being musculoskeletal and 11 to MH with one reported case of PTSD.

Symptoms

A mean of 10 symptoms with a range of 0 to 18 reported symptoms (median = 11; mode = 14; SD = 4.65) were reported by veterans accessing the programme, whereas a mean of eight was reported by the family members with a range of 0 to 17 reported symptoms (median = 7.50; mode = 0; SD = 5.81). In both groups, commonly reported symptoms were feeling anxious (veterans: N = 359, 80%; family: N = 69, 70%), low mood (veterans: N = 357, 80%; family: N = 69, 70%), sleep disturbance (veterans: N = 338, 75%; family: N = 70, 71%), loss of confidence (veterans: N = 313, 70%; family: N = 57, 58%), lack of interest (veterans: N = 295, 66%; family:

N = 45, 46%), feeling hopeless (veterans: N = 296, 66%; family: N = 49, 50%), and poor concentration (veterans: N = 285, 64%; family: N = 55, 56%).

Following exit of the TSS programmes, the average number of reported symptoms by veterans had decreased from 10 to 4 with a range of 1 to 14 reported symptoms. For veterans, there were decreases of over 25% in every criteria except for physical problems, pain, and alcohol

misuse. (See Table 16 and Figure 15). There were smaller exit numbers (N=39) for families, but the results were still positive (Figure 16).

Serial	Symptoms	Veterans				Family Members			
		Entry		Exit		Entry		Exit	
		N	%	N	%	N	%	N	%
1	Low Mood	357	80	79	37	69	70	12	31
2	Anxiety	359	80	112	52	69	70	15	39
3	Sleep Disturbance	338	75	99	46	70	71	14	36
4	Loss of Confidence	313	70	56	26	57	58	6	15
5	Feeling of Hopelessness	296	66	42	20	49	50	3	8
6	Lack of Interest	295	66	57	27	45	46	4	10
7	Poor Concentration	285	64	55	26	55	56	7	18
8	Tiredness	282	63	95	44	70	71	16	41
9	Feeling Isolated	271	61	28	22	46	47	1	3
10	Anger	269	60	36	17	36	37	2	5
11	Physical Problems	215	48	97	45	32	33	11	28
12	Pain	214	48	80	37	36	37	12	31
13	Forgetfulness	213	48	33	15	38	39	4	10
14	Change in Appetite	200	45	31	14	32	33	3	8
15	Thoughts of Self-Harm	190	42	14	7	22	22	1	3
16	Risk Taking Behaviour	135	30	10	5	13	13	1	3
17	Alcohol Use	129	29	24	11	9	9	0	0
18	Mental Health	9	2	2	1	0	0	0	0

Table 16. Self-reported Symptoms at entry and exit by participants.

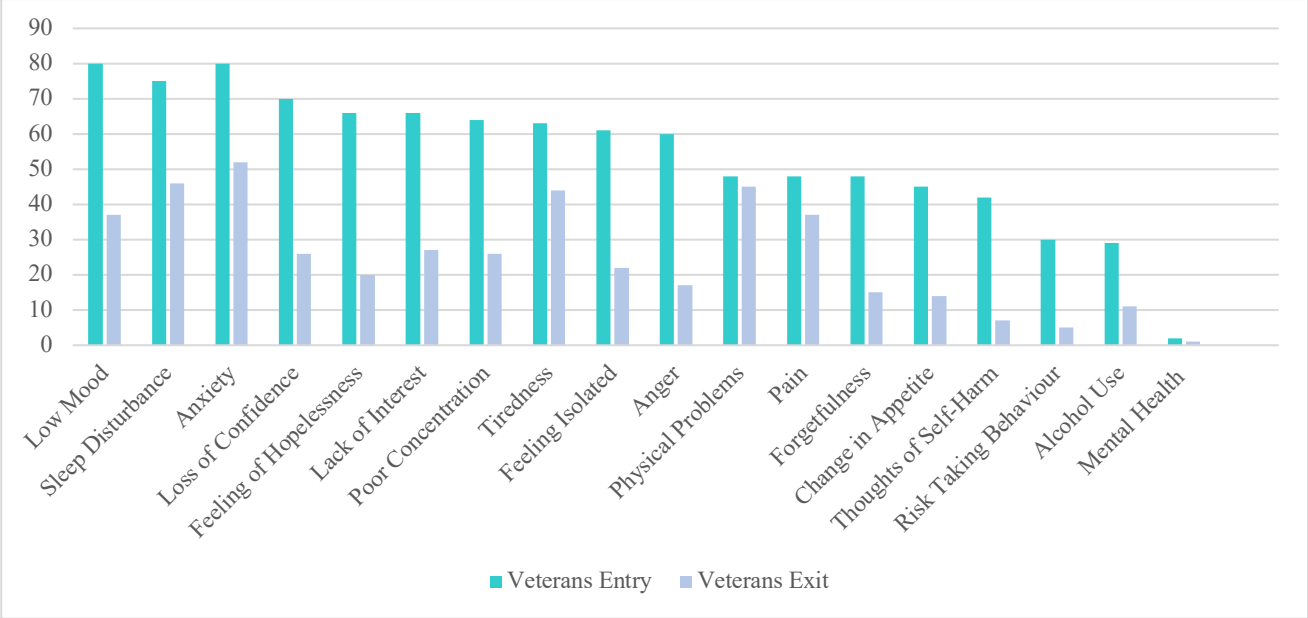


Figure 15. Number of Reported Symptoms by Veterans at Entry and Exit

Figure 16. Number of Reported Symptoms by Family Members at Entry and Exit

No correlations were observed between age and the number of reported predisposing symptoms, except for physical problems, with older veterans reporting higher levels of pain. With gender, male veterans reported greater alcohol abuse compared to female veterans. Correlations were found between the self-reported VAS levels of stress (low, medium, high) and

the number of predisposing symptoms. Veterans who reported high stress levels testified to more predisposing symptoms than veterans that were less stressed.

The number of symptoms reported by veterans and family members on entry and exit to the programme are at Table 17.

SYMPTOMS		Veterans						Family Members					
		Entry (N=436)			Exit (N=211)			Entry (N=96)			Exit (N=24)		
Ser	Symptoms	N	%	Total %	N	%	Total%	N	%	Total%	N	%	Total%
0	**0**	11	2	2	35	16	16	6	6	6	11	28	28
1	**1**	12	3	5	29	14	30	3	3	9	4	10	38
2	**2**	11	2	7	21	10	40	13	13	22	10	26	64
3	**3**	19	4	11	23	11	51	4	4	27	2	5	69
4	**4**	19	4	15	11	5	56	3	3	30	2	5	74
5	**5**	16	4	19	12	6	62	5	5	35	1	3	76
6	**6**	18	4	23	15	7	69	2	2	37	2	5	82
7	**7**	24	5	28	8	4	73	10	10	47	3	8	89
8	**8**	25	6	34	19	9	82	4	4	52	1	3	92
9	**9**	24	5	39	7	3	85	6	6	58	2	5	97
10	**10**	28	6	45	8	4	89	8	8	66	1	3	100
11	**11**	30	7	52	5	2	91	10	10	77	/	/	/
12	**12**	33	8	60	9	4	95	3	3	80	/	/	/
13	**13**	38	9	69	3	1	97	3	3	83	/	/	/
14	**14**	46	10	79	2	0.9	98	8	8	91	/	/	/
15	**15**	39	9	88	3	1	99	2	2	93	/	/	/
16	**16**	24	5	93	1	0.5	100	5	5	99	/	/	/
17	**17**	18	4	97	/	/	/	1	1	100	/	/	/
18	**18**	1	0.2	97	/	/	/	/	/		/	/	/

Table 17. Number of reported Symptoms by veterans and family members following programme entry and exit.

Veterans and family members described symptoms experienced before accessing *TSS programmes*. Eleven described symptoms related to physical health and pain. With MH, 47 veterans and families reported further MH detail such as *"Negative thoughts often disrupt my sleep and/or memories"* and: *"I often feel hopeless and feel as I thought I cannot do anything right",* as well as suicide ideation (N=8): *"constant suicidal thoughts"*, and "*"Suicidal, not caring if I live or die when risk-taking."* Eleven respondents mentioned Covid-19 leading to isolation and loneliness for some veterans and family members before programme enrolment (N=11): *"Was frightened by COVID-19 pandemic"*. Family members highlighted the impact of their caring role: *"caring for husband on my own has taken a toll on me"*.

On exit from the programme, there were a total of 46 comments with 20 physical and 26 MH. Comments surrounding situational stressors regarding employment had slightly increased (N=6), and veterans cited the impact of financial stressors (N=3) following *TSS programme* exit.

VETERAN POOR HEALTH CONTRIBUTORS

Overall results show a decrease in these areas

SITUATIONAL STRESSORS

Reduction post programme from 5 to 3.

e.g. Previous Unresolved Issues, Relationship Problems

SYMPTOMS

Those who reported symptoms decreased from 10 to 4

e.g. Low Mood, Tiredness

ILLNESSES

Dropped from 3 to 2.

e.g. Depression, Anxiety

ALCOHOL/SUBSTANCE MISUSE

Reduction in self reporting as a factor from 25% to 16%.

Support Services

Veterans previously accessing support: Of the 435 veterans who answered this question, 66% (N=289) reported having previously accessed support to help deal with a stressful situation . No statistical correlations were observed between age groups or gender and previous access to support. However, a significant correlation was found between the self-reported VAS levels of stress and previous access to support (r= -.124, n= 398, p=0.13), indicating that veterans who reported higher levels of stress were reporting poorer help-seeking behaviour.

Where veterans sought support: Those veterans seeking support had sought help from several sources, with the majority contacting a mean of two organisations, most commonly their GPs and other MH services (See Figure 17). The accumulative totals being GP 44% (N = 196), other MH services 39% (N = 173), NHS at 34% (N = 151), Charities 25% (N = 114), Family and Friends 18% (N = 82), Veterans Hub 20% (N = 88); and other was 6% (N = 26). See Figure 17. Differences were found between grant holders (see Table 18)

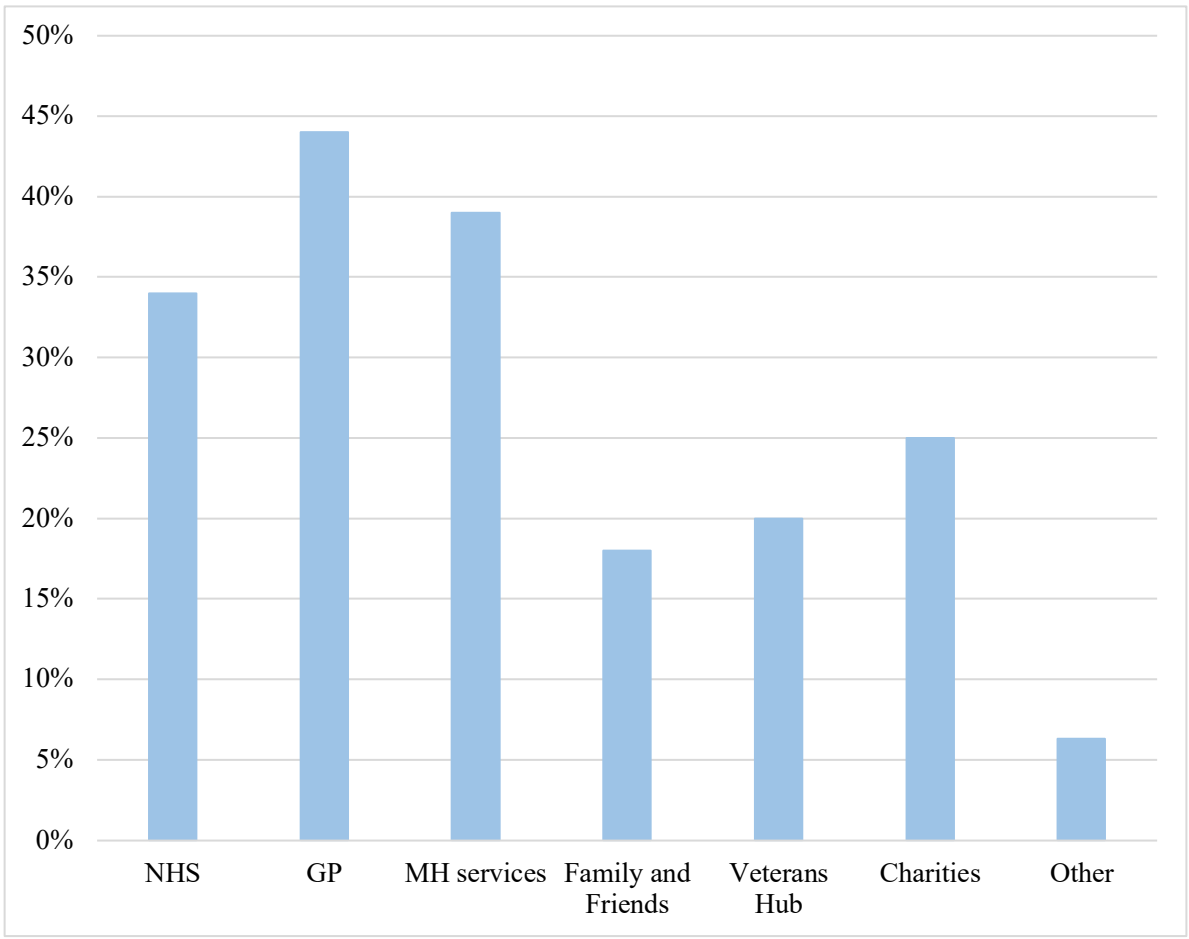


Figure 17. Services where Veterans Sought Support

Serial	Grant Holder	NHS	GP	Other MH services	Family and friends	Veterans Hubs	Charities	Regions
1	Veterans 1st Point	4 (17%)	2 (8%)	4 (17%)	/	/	9 (38%)	Scotland
2	Inspire	38 (34%)	58 (52%)	42 (38%)	14 (13%)	24 (22%)	38 (34%)	NI
3	Ely Centre	9 (26%)	21 (60%)	14 (40%)	9 (26%)	9 (26%)	12 (34%)	
4	CAIS	31 (38%)	38 (47%)	28 (35%)	17 (21%)	15 (19%)	22 (27%)	Wales
5	Wigan	30 (29%)	42 (40%)	42 (40%)	28 (27%)	26 (25%)	19 (18%)	NW of England
6	WWTW	28 (50%)	22 (39%)	28 (50%)	10 (18%)	6 (11%)	8 (14%)	
7	Solent NHS Trust	11 (31%)	13 (36%)	15 (42%)	4 (11%)	8 (22%)	6 (17%)	South of England
8	TOT	151 (34%)	196 (44%)	173 (39%)	82 (18%)	88 (20%)	114 (25%)	/

Table 18. Previously Accessed Support

A large number of 124 veteran participants provided further details to support their answers, indicating where they had sought support such as: "*Combat Stress*", *"British Legion"*, *"SSAFA"*, and Veterans Associations (N=16): and NHS Services (N=15): *"Mental Health Services NHS"*, *"NHS Support Team from Veteran's Outreach Support"*.

Delayed help-seeking: Veterans who delayed seeking help did so due to a mean of two factors, commonly 'finding it hard to ask for help' at 44% (N = 197); 'unaware of the support available' 31% (N = 138); 'not knowing where to go' 25% (N = 112); 'difficulty accessing help' 18% (N = 81); 'not feeling they needed help' 19% (N = 85); 'unaware of the one-day inclusion criteria to be classed as a veteran' 13% (N = 58); 'being unaware of veteran status 4% (N = 16); and other reasons, at 4% (N = 17). See Figure 18.

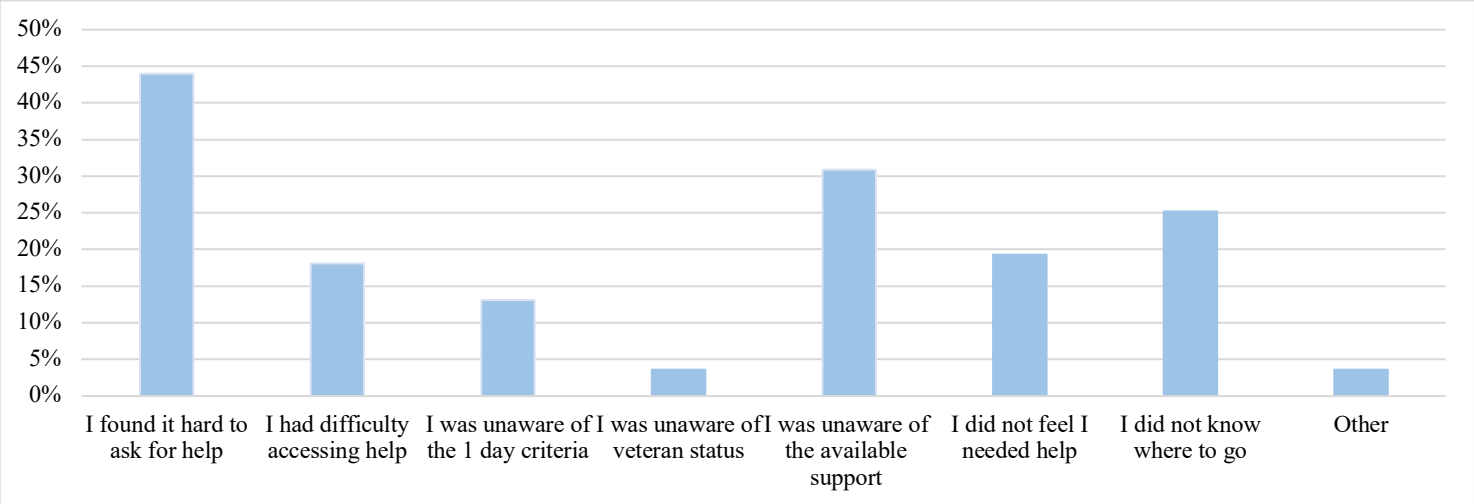


Figure 18. Delayed Help-Seeking

Participants written comments provided further details to explain the poor help-seeking behaviour. Ten reported that they were reluctant to seek help due to their pride (N=10): *"During military services, you did not want to ask for help if you had a problem. It was a sign of weakness"*, and *""I have avoided getting help to address my MH issues; it is embarrassing to admit you have a problem and to tell other people about it"*. Some veterans found it hard to seek help or were fearful of rejection from MH services: *"I did not feel I would receive help, as I have been turned down before"*, or that they were wasting people's time. Some didn't know where to go for support: "*At first I didn't think I needed help and I could cope and when things went wrong, I didn't know/want to ask for help*". This poor help-seeking behaviour was cited as commencing whilst serving because of concerns regarding the career implications. For eight veterans, previous negative experiences were cited as a reason for their reluctance to seek: *"No one hears you when you need help!", "Last psychiatrist said he would phone every three months but not heard from them in over a year."* There were two veterans who reported alcohol misuse as a barrier to seeking help: *"My alcohol addiction was a barrier for me engaging with help, so I avoided asking for help, as I know I would probably fail"*. Twelve family members provided an insight to the impact on the whole family: *"I tend to work through my difficulties on my own as this is what I'm accustomed to doing. I have lived with my husband, who has PTSD, which was undiagnosed and untreated for many years. This has adversely affected him, me and my family and has been a horrendous experience. I am not exaggerating when I say that we as a family desperately need help."* A Word Cloud highlighting the common themes is in Figure 19

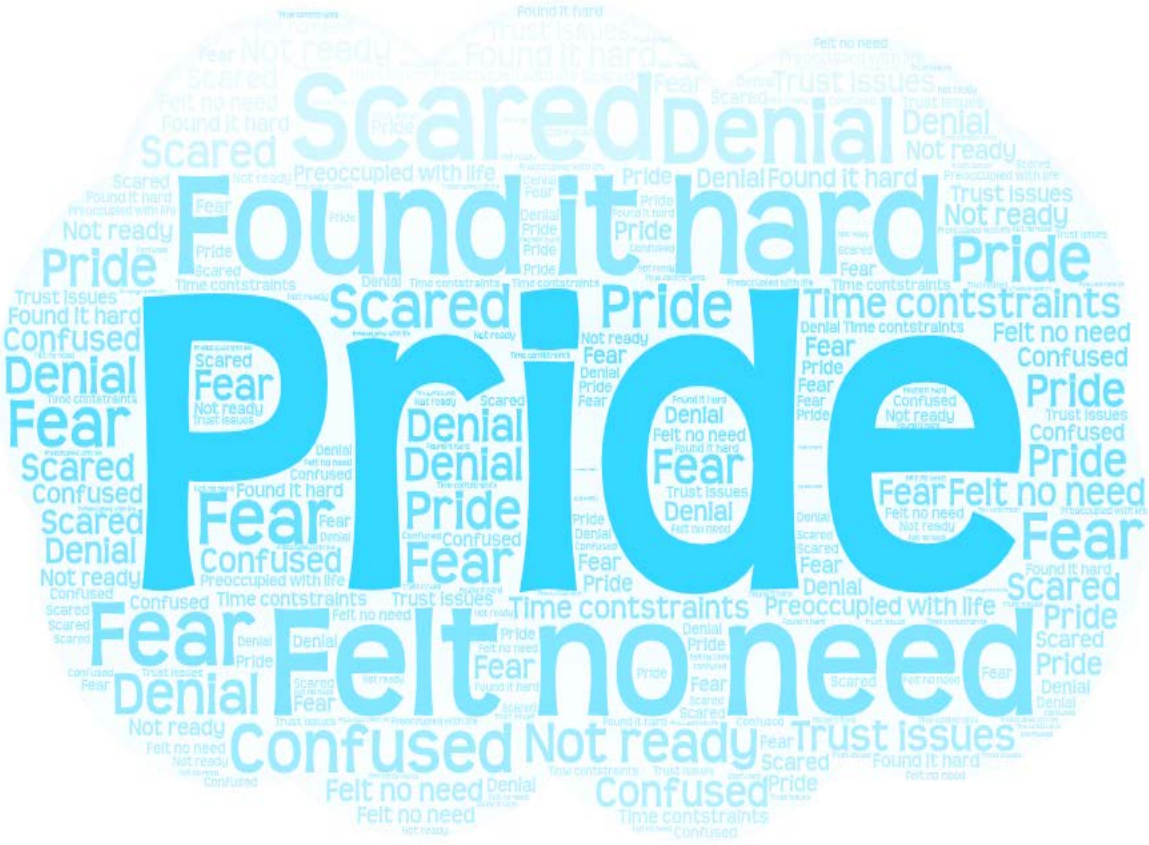


Figure 19. Word Cloud of Common Themes raised regarding Help-Seeking

How Veterans accessed TSS : Veterans indicated how they were directed into the TSS programmes. A number of sources were reported, these being: charities (39%, N = 174), self-referrals (16%, N = 70), referred by friends (11%, N = 50), by their GP (9%, N = 39), Veteran NHS (6%, N = 28), referral as part of the discharge process (4%, N = 17), referred by their spouse / partner (3%, N = 15), other family member (2%, N = 9), an advert (2%, N = 8), and other (7%, N = 32). Of these, 110 provided written comments to describe how they were directed into *TSS programmes* (N=110). Charities were referred to 38 times including: *"Royal British Legion", "Walking with The Wounded", "Inspire", "Help for Heroes",* NHS Services (N=25): *"Veterans NHS Service", Veteran Transition Intervention and Liaison Service (TILS), "NHS Counsellor",* or AFC or Veterans Associations (N=15)*: "Veterans Organisation", "Wigan Armed Forces", "UK Veteran War Pension support."*

Social Networks

Regarding social networks, 53% (N = 237) of veteran participants reported having 'some' people to reply on, 23% (N = 103) reported 'having people to rely on', and 23% (N = 104) reported having 'no one' to rely on, missing data was reported for 4 participants. Similarly, from the family members group, 53% (N = 52) reported having 'some' people to reply on, 28% (N = 27) reported 'having people to rely on', 28% (N = 27) and 18% (N = 18) reported having 'no one' to rely on. Missing data was reported for 1 participant.

Of those veterans whose social interactions involved meeting people, most met people 'once or twice a week' (36%, N = 162), as did family members (32%, N = 31). This was followed by meeting people 'once or twice a month' (23%, N = 102 of veterans, and 22%, N = 22 of family members), 'three times a week or more' (14%, N = 64 of veterans, and 26%, N = 25 of family members), and 'every few months' (15%, N = 69 of veterans, and 14%, N = 14 of family members).

Participants offered 140 comments regarding their social networks although they predominately related to social isolation (N=86) and Covid-19 (N=54). These included: "*Never meet people. Do not leave the house unless needed to"*. Thirty three did report meeting close family, friends or partners. "*I only see my dear wife. Sometimes we see no one for months*", Small numbers described football training, visiting pubs or work related events. *"I have a partner but currently lives apart. I normally meet my friends every week. However, because of Covid-19 and lockdown, I have not been able to see them. I also didn't see my partner as she was shielding"*. In addition, ten participants reported the negative impact of physical and MH as barriers to meeting people: *"Hard to keep friends due to PTSD",* and *"it's very hard to meet with people because of my depression and stress."* and *"I am on my own isolating with respiratory bronchial interstitial lung disease."* Exit questionnaire comments indicated improvements in social networks which expanded their social network through sports clubs or societies although the major comments indicated that the key barrier remained the Covid-19 pandemic.

Sixty-four per cent (N = 288) of veterans were not active members of any clubs, organisations, or societies. The other 33% (N = 147) were members of various clubs, organisations, or societies, such as the local gym/sports clubs, veterans' associations including the Royal British Legion, Ulster Defence Rifles, all arms veterans motor cycle club, veteran breakfast clubs, and bands/music club. Sixty-eight per cent (N =67) of family members were not active members of any clubs. The other 29% (N = 28) were club members, including a local gym/sports club, music clubs, and veterans' associations. Two per cent (N = 2) preferred not to disclose this information. There were 216 veterans and family members who provided further written details to support their answers that best described their associations with clubs, organisations, or societies. Participants were predominately associated with Armed Forces charities (N=64): "*Combat Stress Group*", *"Member of Talking Change", "Positive Mind Veterans Quick Reaction Force Peer Support Group"*, followed by societies (N=59): *"Motorbike club", "Music Society", "Meet-up social group"*, sports clubs (N=48): *"Golf Club", "Rugby Club", "Fishing Club"*, and AFC and Veterans Groups (N=37): *"Veteran's Breakfast Club", "Veterans Model Club"*.

Four hundred and thirty seven participants answered the questions regarding how they compared themselves to people of their own age and self-reported how often they took part in social activities. Veterans reporting 'much less than most' were 53% (N = 234), 'less than most' were 23% (N = 100), 'about the same' (14%, N = 61), 'more than most' were 4% (N = 18), 'much more than most' were 1% (N = 6), and 'I don't know' was 4% (N = 18) and 11 were missing data. Family members also compared themselves to people of their own age and reported how often they participated in social activities. Those reporting 'much less than most' were 44% (N = 43), 'less than most' 26% (N = 25), 'about the same' (15%, N = 15), 'more than most' were 6% (N = 6), 'much more than most' were 3% (N = 3), and 'I don't know' was 4% (N = 4) and 2 were missing data. See Figure 20.

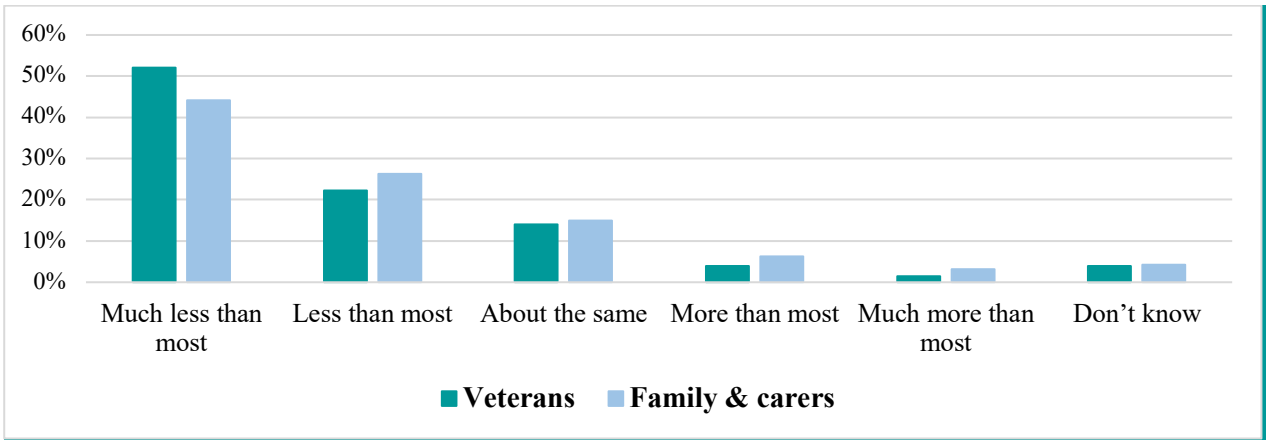


Figure 20. Participants Social Activities Compared to Those Their Same Age

No statistical correlations were observed between age groups or gender and social networks. However, a significant correlation was found between the self-reported VAS levels of stress and

social networks, indicating that veterans who reported higher stress levels reported fewer social interactions (r_s = -.228, p<.001).

Following the programmes, improvements in their social networks were significant for 'taking part in social activities, (X2(6) = 43.52, p = .00), 'active members of clubs' (X2(2) = 18.11, p =.00) and 'how often do you meet people' (X2(5) = 12.08, p = .03). No improvements were found for 'relying on people'.

Case Study 5: CAIS

Bleddyn grew up in Wales, spending much of his time outdoors exploring the countryside. He worked hard at school, gaining qualifications that allowed him to pursue the dream of an Army career.

In August 2009 he enlisted into the Royal Signal Corps. The recruit training was challenging but enjoyable, allowing him to move confidently into trade trading. Bleddyn's knowledge of communications equipment and networks developed into high competency levels and he graduated from trade training, eager to immerse himself in his new career. A deployment to Afghanistan followed and this tour required Bleddyn to be robust and competent under pressure. His role demanded a high degree of commitment to support his patrolling colleagues. The tour had a profound effect upon Bleddyn, but he successfully returned to regular Army life in the UK. Bleddyn was an ambitious soldier. He became frustrated at the lack of opportunity for career progression in trade. His interest in telecommunications and engineering had grown considerably. Following careful consideration, he chose to pursue a civilian engineering career. Bleddyn left the Army in June 2018.

Bleddyn landed a key role in the field engineering team of a leading telecommunications company. Initially, the transition to civilian life progressed well. However, although Bleddyn had married his sweetheart and was deeply in love, he began to encounter significant difficulties at work. Bleddyn found his co-workers operated on a very different level to his former colleagues in the military. Targets and timescales seemed less important. He perceived a lack of focus and task driven attitude, all of which were the opposite to the hard working, professional attitude he was familiar with. Increasingly, he found it impossible to relate to his colleagues and became isolated. His manager noticed his isolation and rather than supporting him, identified him as a problem, not a solution. With his mental health beginning to fail, Bleddyn left the company.

Bleddyn was hurt by this experience. He felt under-valued, misunderstood, and isolated. Despite support and encouragement from his wife, his mental health deteriorated. He retreated to his home, locking himself away from the civilian community he now lived in. This was in complete contrast to the confident young soldier he had been only months before. Despite this, Bleddyn secured an excellent new job, joining a national power distribution company as an Engineering trainee. The hard-working mentality remained, but unfortunately the transitional issues resurfaced; civilians were so different! Unable to cope and under immense pressure he suffered a near catastrophic deterioration of his mental health.

An extended period of sickness absence from work followed. As Bleddyn sought help to address his health he was signposted to Change Step. Nervously, Bleddyn contacted Change Step and a short time later he met a Peer Mentor. This was a turning point for Bleddyn. The Peer Mentor's assessment identified areas where some focused work could help Bleddyn. A pathway to treatment for his mental health illness began.

There followed a rapid referral into the Veterans NHS Wales service. Progressive meetings the Peer Mentor and Bleddyn to agree a comprehensive support plan. This included tasks and responsibilities, which Bleddyn responded positively to. An initial thrust of moral encouragement, delivering accurate information and advocacy steered Bleddyn towards recovery. The Mentor liaised with Bleddyn's employer Occupational Health Department, which brought a really supportive edge to the recovery journey.

The company agreed to pay for private counselling, and this was key to stabilizing and preparing Bleddyn for a pathway into treatment with the Veterans NHS Wales Therapist. The Mentor was on hand to support Bleddyn at the Triage and Assessment phases of the pathway into treatment with Veterans NHS Wales. This involved explaining, encouraging and reassuring him that the effort he was making would pay dividends. Whilst Bleddyn waited for his treatment to begin, the Mentor established regular liaison with the Veterans NHS Therapist. The Coronavirus pandemic frustrated efforts to make progress, increasing the time Bleddyn remained waiting for treatment. During this waiting period, Bleddyn continued to work hard with his Mentor to prepare for talking therapy.

Accepting personal responsibility was an important part of the support plan, which led to Bleddyn conducting his own research into mental health. This led him to follow a former Royal Marine whom offered life coaching on a social media platform. Coupled with publications from a former Special Forces Operator, Bleddyn found common ground with the two veterans and began his own effort to improve his mental wellbeing. All the time Bleddyn found value and support in explaining his learning and activity with the Mentor.

The Counsellor continued to play an important supporting role, aiding understanding of how to manage mental health and wellbeing. Encouragingly, a gradual return to work occurred. The Mentor liaised with the Occupational health department, offering advocacy to ensure the company was aware of the legitimacy of Bleddyn's effort, his integrity and value to the company. The return to work went well and Bleddyn made use of his new knowledge to progress his recovery. A supportive manager, elsewhere in the company and himself a Royal Signals veteran was instrumental in supporting Bleddyn.

Bleddyn harbours ambitions to help other males experiencing mental health illness. With assistance from the Mentor, he recorded a short video, illustrating his recovery story. This video is now published on the West Wales Action for Mental Health recovery website. It is also used as a training aid for CAIS the mental health charity.

As Covid restrictions eased, the treatment plan with the Veterans NHS service began. This involved walking and talking in an outdoor environment with a Therapist. It was clear to the Therapist that Bleddyn had undertaken a significant amount of preparation work. This allowed her to formulate a short and intense programme of treatment, which Bleddyn fully engaged with. The result was a rapid improvement in Bleddyn's confidence and self-esteem. He learned new skills to help cope with the fear of failure and the challenges that lie ahead. Without fuss, Bleddyn completed his treatment in March2021. Essentially, the Mentor's work now came to an end, as Bleddyn felt stronger than ever, fully adapted to civilian life and more content with his new identity in "civvy street". His transition was a very difficult one and the impact of leaving the Army was little understood until it was nearly too late. He now wishes to help other former members of the Armed Forces and has joined the Positive Pathways programme. A mention in this case study must go to Bleddyn's wife, who remained incredibly supportive and patient throughout his illness and recovery. Without her unstinting support, standing Bleddyn throughout his illness, he would have found his hard-won recovery far more difficult and undoubtedly longer.

Employment and Housing Status

Employment: Many veteran participants were unemployed at 44% (N = 193). Those employed were 33% (N = 147, earning a mean of 24k). Retired were 16% (N = 71), those who specified "other" as a non-specified reason were 3% (N = 14), those who preferred not to disclose the information were 2% (N = 7), with those volunteering 0.4% (N=2), unemployed and volunteering 1% (N=3) or on employment support allowance were 1% (N=3). Missing data was N=8.

Following exit of the TSS programmes, unemployment rates had fallen to 34% (N=71) and slight increases for employment 36% (N=76), retired 20% (N=43) and volunteering 4% (N=9) were observed. Those who specified "other" as a non-specified reason were 4% (N = 9), those who preferred not to disclose the information were 1% (N = 2), with those unemployed and volunteering 1% (N=1) or on employment support allowance were 1% (N=1). Missing data was N=3. See Figure 21.

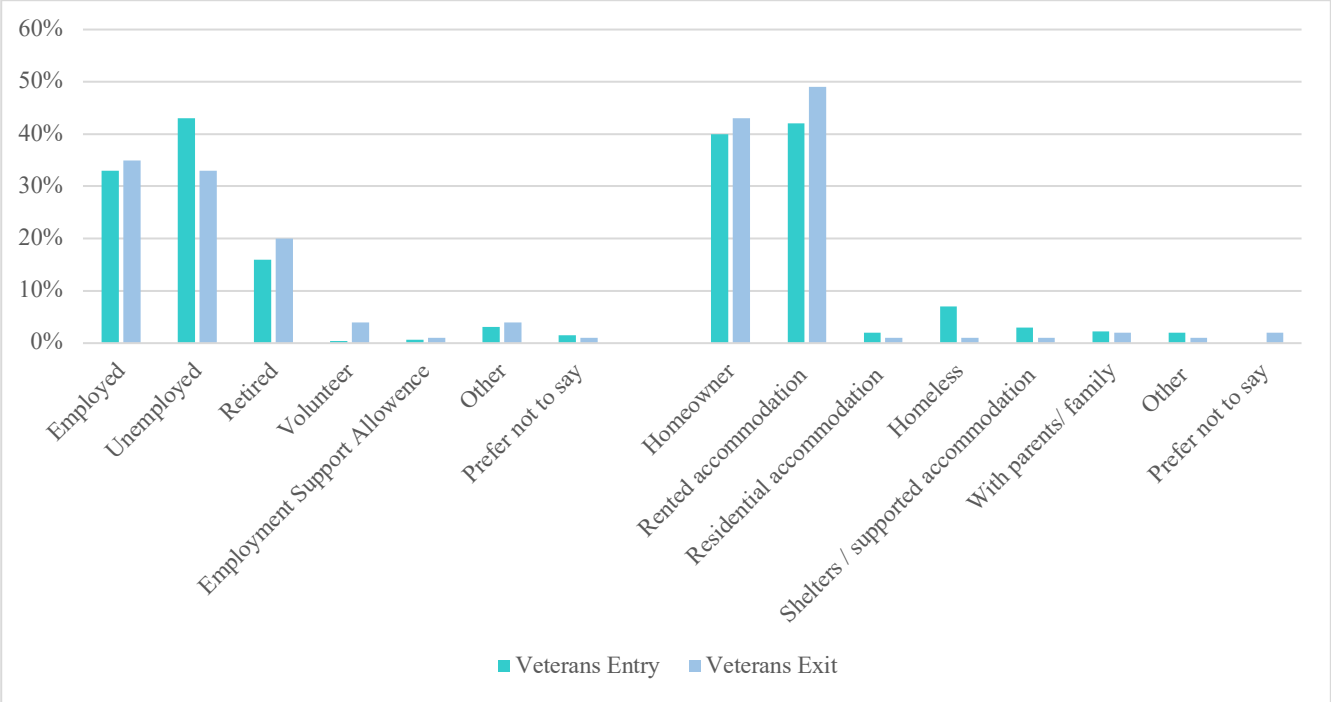


Figure 21. Veterans employment and housing status following programme entry and exit

Significant employment differences were found between grant holders ($X_2(42) = 136.98, p = .000$; see Table 19).

Veterans and family members described their current employment (N=104). These ranged from self-employed, part-time work, and employed and included jobs such as a Police Officer and HGV Driver. *"Part-time 15 hours – trolleys at local Tesco store"* and ""*I work 3 days a week on minimum wage*". Veterans described their physical and/or MH as a barrier to employment (N =25): *"Disability severally hinder the opportunity to work, but I am willing", "Forced to retire due to mental and medical condition in 2008 and deemed unemployable by the War pensions"*. Twenty veterans and family members were still in active employment on exiting the programme, predominately self-employed (N=6) and continued to work within various public and private sectors (N=14).

Ser	Grant Holder	Employment			Housing			Accommodation		
		Employed	Un-employed	Retired	Homeowner	Renting	Homeless	Living alone	Living with spouse/ partner	Living with family
1	Veterans 1st Point	12 (50%)	8 (33%)	1 (4%)	14 (58%)	7 (29%)	/	4 (17%)	6 (25%)	17 (71%)
2	Inspire	37 (33%)	32 (29%)	36 (32%)	68 (61%)	32 (29%)	3 (3%)	30 (27%)	64 (58%)	17 (15%)
3	Ely Centre	11 (31%)	10 (29%)	11 (31%)	27 (77%)	7 (20%)	/	4 (11%)	26 (74%)	7 (20%)
4	CAIS	23 (28%)	39 (48%)	8 (10%)	26 (32%)	46 (57%)	4 (5%)	31 (39%)	33 (41%)	13 (16%)
5	Wigan	37 (35%)	52 (50%)	7 (7%)	21 (20%)	45 (43%)	15 (14%)	30 (29%)	28 (27%)	23 (22%)
6	WWTW	4 (7%)	47 (84%)	1 (2%)	7 (13%)	34 (61%)	7 (13%)	34 (61%)	11 (20%)	6 (11%)
7	Solent NHS Trust	23 (64%)	5 (14%)	7 (19%)	14 (39%)	15 (42%)	/	7 (19%)	16 (44%)	9 (25%)
8	**TOT**	**147 (33%)**	**193 (43%)**	**71 (16%)**	**177 (40%)**	**186 (42%)**	**29 (7%)**	**140 (31%)**	**184 (41%)**	**92 (21%)**

Table 19. Veterans Employment, Housing and Accommodation status by Grant Holders.

Housing: Of the 425 participants who reported on their housing situation, 44% (N = 186) were living in rented accommodation, 42% (N = 177) of veterans were homeowners, 7% (N = 29) were homeless, 1% (N=6) were living in shelters, 2% (N=7) living in supported accommodation, 2% (N=11) living in residential accommodation, and 2% (N = 9) were living with parents/family. Missing data was N=23. Significant housing differences were found between grant holders ($X2(48) = 140.58$, $p = .000$.

Following exit from the TSS programmes, the number of veterans that were either homeowners or living in rented accommodation had increased to 44% (N=93) and 50% (N=106). Decreases were observed for those veterans that classified themselves as homeless 2% (N=1), those living

in supported accommodation 1% (N=1), residential accommodation 1% (N=2) or with parents/ family 2% (N=4). Missing data was N=2.

Accommodation: Veteran participants currently living with their spouse / partner were 41% (N = 184), followed by those living alone at 31% (N = 140), with family 21% (N = 92), with friends 3% (N = 14), professional house share 3% (N = 12), in shelters 0.4% (N = 2), those who preferred not to say were 1% (N = 4), and those who responded with 'other' were 4% (N = 18). In these responses, some veterans ticked more than one answer. However the mean common response was one answer. It is anticipated that Covid-19 will hold / had further implications regarding employment and housing (See Table 19).

Following exit of the TSS programmes, veteran participants currently living with their spouse / partner 43% (N=95) and alone 34% (N=75) had slightly risen. Those living with family 19% (N=42), with friends 1% (N=3) or professional house share 2% (N=5) had slightly decreased following programme exit.

Comments surrounding housing difficulties were provided by 132 participants. Participants commented on factors leading to their living arrangements such as separation and their relationship status (N=12): "Currently separated from my wife". Written narrative was offered that indicated that some were unhappy with their current living arrangement (N=6): "The place I live in is not suitable as it's very small in space and I really need help to get a bigger property with a garden as I cannot cope with closed small spaces", "Not ideal living here as it is like being in a drug den and there is always fighting. Just a noisy environment overall." Participant referred to be sofa surfing, living with their family or in supported accommodation, such as: "Council tenant", "Living in a van with my dogs", "Find that housing is an issue I had to get my flat myself...".

Over the period of the evaluation, there were no significant changes were found for housing situations (t (.976) = 203, p = .330) or employment status (t (-.087) = 205, p = .930). However, despite no statistically significant difference surrounding homelessness following exit of the TSS programmes, homelessness decreased from 7% (N=29) to 2% (N=2). Specifically in the Northwest of England, Walking with the Wounded (Entry: N=15, 14%; Exit: N=2, 5%) and Wigan Council (Entry: N=7, 13%; Exit N=2, 8%) demonstrated decreases of 9% and 5% following TSS programme exit.

Validated Psychometric Questionnaires

On programme entry, the studies psychometric questionnaires show a sample with moderate to moderately severe depression and anxiety. The total number of psychometrics questionnaires received at entry and exit are in Table 20 and the mean scores for the psychometric questionnaires are presented in Table 21.

Ser	Psychometric questionnaire	Psychometric Questionnaires Received			
		Entry	Exit	Entry	Exit
		Veteran (N=448)	Veteran (N=215)	Family (N=98)	Family (N=39)
1	PHQ-9	426	194	33	31
2	GAD-7	428	193	33	31
3	WSAS	407	188	31	29
4	WEMWBS	422	190	32	30
5	AUDIT	411	184	34	32
6	EQ-5D-5L VAS	433	209	40	39

Table 20. Psychometric Questoinnaires Received at Programme Entry and Exit

Ser	Psychometric questionnaire	Score Range	Mean Scores Entry		EXIT	
1			Veteran	Family	Veteran	Family
2	PHQ-9	**Depression:** 1-4 Minimal; 5-9 Mild; 10-14 Moderate; 15-19 Moderately severe; 20-27 Severe.	16	6	9	7
3	GAD-7	**Anxiety:** 0-5 Mild; 6-10 Moderate; 11-15 Moderately severe; 15-21 Severe.	13	7	7	5
4	WSAS	**Work and activity productivity:** 10-20 functional impairment but less severe clinical symptoms. Scores above 20 suggest moderately severe or worse psychopathology.	24	10	16	11
5	WEMWBS	**Mental Health:** Scores less than 40 are associated with a higher risk of major depression.	32	48	44	48
6	AUDIT	**Alcohol:** A score of 8 or more is associated with hazardous or harmful alcohol use.	10	4	7	3
7	EQ-5D-5L VAS	**Quality of Life:** Scores range from 0 associated with worst health imaginable and 100 best health imaginable.	47	69	63	68

Table 21. Psychometric Mean Scores Across Programmes on Entry and Exit

Similarly, improvements in self-reported scores of validated psychometrics were found for the PHQ-9 ($t(209) = 12.86$, $p < .01$), GAD-7 ($t(207) = 12.72$, $p < .01$), WEMWBS ($t(202) = -10.98$, $p < .01$), AUDIT ($t(196) = 4.13$, $p < .01$). (Table 21) Thereby indicating less depression, anxiety, harmful alcohol consumption and improvements in health and wellbeing.

Case Study 6: Walking With The

Billy and Ali's Story (NCCP). 'Walking With The Wounded found the perfect formula for us. They supplied constant help and there was always someone on speed dial if we needed them. Our NCCP Care Co-ordinator was a saviour! We can't speak highly enough of her – she sorted out everything we needed – regular mental health support, provisions and, the correct benefits.' Billy grew up in County Durham. As a boy he had been in the cadets and so, when he left school aged 16, he decided to join the military and became a Guardsman in the Scots Guards. Billy was in the Army for 6 years he was a competent soldier and achieved a good service record.

Billy was deployed to Northern Ireland and to the Gulf War and it was during his time on tour in Iraq that he suffered a crushing head injury. It was his family who first noticed the significant change in his personality – Billy had always been very outgoing, but he had become withdrawn and suffered from nightmares and excessive mood swings. Unfortunately, these symptoms were initially misdiagnosed, and the anti-depressants prescribed by his GP did not alleviate his problems. Billy was very capable technically and he loved to work on anything mechanical (especially motorbikes!) but he had become unreliable and found it impossible to hold down a job. When Billy met Ali, they immediately saw 'something special' in one another and they were extremely happy together. Ali had two children and at the time, she worked in a secondary school for students with behavioural issues and she understood how to handle sensitive issues and how to deal with mental health problems. In 1999, Billy and Ali got married, they had a baby girl and things were perfect for a few years until they very sadly lost their second baby. This impacted heavily on Billy and on their relationship - his troubles resurfaced and continued to do so at regular intervals for the next 20 years.

Eventually, Billy was diagnosed with PTSD and was given the correct medication for his condition but as he had been self-medicating with alcohol and marijuana for many years, his mental health had seriously deteriorated. In 2015, Ali was diagnosed with mental health problems directly caused by the stresses of living in a volatile home environment and then, the following year, she was diagnosed with colorectal cancer and had chemotherapy and underwent several major life-changing surgeries. By this time, Ali had completely shut down from Billy, she was exhausted and seriously needed a break from the stress. In 2019, Billy had an angry outburst and the police were called. By chance, the police officer who attended the scene was also a Gulf veteran and was sympathetic to Billy's situation and he directed the couple to the WWTW.

Everything was about to change. The WWTW NCCP Care Coordinator assessed the situation and put together a plan of action. She explained that Billy was really struggling and that he needed constant help and monitoring. It was a moment of realisation and a relief to know that finally there was someone who understood and who could offer support and help lift the burden of their situation. In the first instance, their Care Coordinator arranged for Billy to receive regular visits from the NHS Veteran's Mental Health Team (TILS) and she sorted out the family's benefit claims.

The Care Coordinator also found a way to utilise Billy's mechanical skills and since November 2019 he has volunteered for the bike restoration charity Recyke Y'Bike based in Newcastle. This work has proved to be particularly positive for Billy's happiness and wellbeing. 'I've never seen Billy so happy now that he has new challenges and is able to use his skill sets. It's like therapy for him.' As a result, Billy is no longer drinking, using drugs or receiving help for his mental health. He and Ali are now strong enough to support other family members who need their help - their two nieces are both NHS nurses and who both caught coronavirus – Ali and Billy took them food and kept in touch whilst they were ill and in self-isolation. Billy and Ali are now motivated in their support for the NHS and appeared in their own WWTW 'Clap for the NHS' video.

Billy plans to continue working at Recycke Y'Bike and hopes to take part in a project to repair WW2 vehicles. Ultimately, he would like to use his skills towards some form of paid employment. The family is now working together, their three children, Sarah, Sean and Katie, are all doing well in life and thanks to WWTW's support, they are now leaving the past behind and forging ahead. ***'Despite everything that has happened, we have come through it and we are stronger and happier as a result'.***

Case Study 7: Walking With The

Mark

'The suffering and grief, was a nightmare, I remember sitting in hospital and thinking 'what am I doing here, the Army isn't for me anymore.'

Mark joined the RLC aged 21 and after he had completed his training at Winchester and Deepcut, he was posted to Germany. It was here, whilst completing his Physical Training Instructor course (PTI), that Mark snapped his tibia and therefore missed his unit's deployment out to the war in Afghanistan.

One day, whilst he was in hospital recovering from an operation to repair his leg, he watched the television news and heard that his best mate had been killed by an IED. Mark contacted his mate's mother and pregnant girlfriend and together they shared the grief from this tragic and sudden loss.

Mark eventually made a full recovery, but the doubts remained in his mind and although he tried his best to get on with it, in his heart he had lost interest and motivation. He managed to get transferred back to the UK but he had started to drink heavily and to have seizures and panic attacks. At first, he was too scared to talk to anyone or ask for help and when he did finally go forward and speak out, he was branded a 'waste of space'.

Eventually, in 2012, Mark signed off and left the military, but no sooner had he done so, than he started to have doubts and regrets and he couldn't cope with civilian life. The only way he could get through the day, was to drink and he found reasons not to go out and caused arguments at home to avoid leaving the house. To make things worse, he had also started to obsessively watch military 'firefight' videos (footage of actual combat situations recorded live by troops in action) on YouTube and he became increasingly isolated and aggressive.

'I started to self-harm. I cut myself and felt a relief in the pain … to share in the pain that I inflicted every day on everyone around me. My family and friends tried to help but they couldn't, and I made them all suffer.'

Mark has a young daughter who he absolutely adores and so unsurprisingly, his partner was desperate for him to go and get help so that they could remain together as a family. When he did eventually go to hospital, staff mentioned social services and, worried that his daughter would get taken into care, he walked out immediately.

Eventually, his relationship broke down. He turned against everyone and didn't even go to see his daughter for weeks at a time. He slept rough, out in the fields in the middle of winter, not caring if he survived the night.

When Mark lost his driving licence through drink driving, the probation office helped Mark to find accommodation and to receive benefits. They also put Mark in touch with the Northumberland Recovery Partnership (NRP) but he had to be dry to receive their help and he just couldn't do it as he was so physically dependent on alcohol.

Desperate and frustrated with his situation, one day Mark held a knife to his throat and threatened to kill himself – it was a cry for help - the Police came and he was referred to the NCCP programme at WWTW.

'WWTW understand the military and they know how to help. Simon knew it was really hard for me but he persisted and got me a place on the veteran's rehab programme at Tom Harrison House. I did it for my daughter and it was brilliant, I was there for 3 months, and now I've been dry since April.'

Simon then helped Mark to access the second stage rehab abstinence programme provided by the NHS Oaktrees and he is currently participating in regular, online patient meetings.

Mark knows exactly what he wants to do next and plans to use his own experiences to help others. He intends to pursue a career in Mental Health and Counselling and WWTW are helping him access the right courses to set him on the road to a new career. He has restored contact with his partner, family and friends and when Mark is ready, he will explain to them what he has been through and how he is rebuilding his life.

Qualitative data

A total of 578 veteran participants (entry questionnaires, n=361, exit questionnaires, n=217) and 120 family members (entry questionnaires, n=82, exit questionnaires, n=38) provided additional comments. Quotes extracted from the questionnaires were anonymised and embedded in the results above. The associated themes and categories are in table 22.

Serial	Theme	Category
1	Traumatic Event	Trauma-related to service Trauma-related to health Verbal, Emotional or Physical Abuse Trauma-related to family or friends
2	Reasons for leaving the Armed Forces	Health Personal Reasons Out of Veterans Control Negative experience related to service Discharge Verbal, Emotional or Physical Abuse Misconduct
3	Long-standing physical or mental illnesses or disability	Illness or Disability Risk-taking behaviour Bereavement Motivation Personal Affairs Social Networks Trauma*
4	Factors that contributed to participants accessing the programme	Factors related to health Trauma Personal Affairs Verbal, Emotional or Physical Abuse Social Network Issues Risk-taking behaviour Bereavement Demotivation Environment
5	Symptoms experienced before accessing the programme	Symptoms related to Health Environment Risk-taking behaviour Personal Affairs Trauma Verbal, Emotional or Physical Abuse
6	Previously sought support	Charities Armed Forces Community or Veterans Associations NHS Services Work Council Police Self-help Sports Clubs
7	Delayed seeking help	Barriers Need for support
8	Directed into Programmes	Charities NHS Services Armed Forces Community or Veterans Associations

		Council Police Social Networks Work Housing Association Social Services Sports Clubs
9	Social Networks	Frequency of Encounters Types of People or Groups Barriers to Meeting People Type of Encounters Additional information surrounding social networks*
10	Active member of clubs, organisations, or societies	Charities Societies Sports Clubs Armed Forces Community or Veterans Associations ActiveOn the Volunteer Educational Organisations
11	Employment	Type of Employment Unable to work Job Title Scheduled working pattern
12	Living Arrangement	Living with Type of living arrangement Relationship status Satisfaction with living arrangement
13	Specific Treatment*	Sources of Treatment Sources of Support Outdoors Intervention Skills
14	Additional Comments and Feedback	Questionnaire Feedback Military Career Northern Ireland Specific Motivation Negative programme feedback* Explore current issues with charities

(*) From exit questionnaires only.

Table 22. Qualitative Coding Framework

The exit questionnaire offered the participants an opportunity to describe the three most positive aspects of the *TSS* programmes and the three elements for development.

Most positive elements of the programme

Veterans and family members provided detail regarding the three most positive elements of the *TSS* programmes. Using a content analysis to count the accumulative scorers indicated that

the three most positive elements of the TSS were the support provided (N=359), the programme provided (N=214 and the positive impact on health, wellbeing and social networks (N=107). These key content identified are summarised below in Table 23.

Three most positive elements	Specifics	Individual frequency	Total
Support Provided	General Help and Support	74	359
	Staff	49	
	Help with Personal Affairs	44	
	Likeminded People	31	
	Listening Talking and Understanding	25	
	Better Understanding	21	
	Contact and Communication	16	
	Ease and Relaxed	15	
	Someone to talk to	14	
	Talking through difficult topics	13	
	Empathy	11	
	Non-judgemental	10	
	Feeling Understood	9	
	Time Given	7	
	Confidential	6	
	Not alone	6	
	Specific Type of Support		
	Alcohol Support	2	
	Emotional Dog Support	2	
	General MH Support	1	
	Health Support	2	
	Overcoming Stigma	1	
Programme Provided	Type of treatment	63	214
	Gratitude	64	
	Programme Satisfaction	44	
	Information Provided	11	
	Treatment Setting	11	
	Referrals	9	
	Environment or Facilities	5	
	Learning new skills	5	
	Programme Availability	1	
	Would Recommend	1	
Positive Impact Health, Wellbeing and Social Networks	Positive outlook and improved wellbeing	63	107
	Social Element	32	
	Family Participation	6	
	Improved Family Relationships	4	
	Transport	2	

Table 23. Three Most Positive Elements of the TSS programmes

With regards to support provided, 74 participants valued general help and support: *"I don't know what I would have done without the support from the mentor and people I was introduced to", "the mentoring has been very effective, having someone with knowledge, contacts and experience who can always talk sense to me, get the right help and stop me from letting my anger get out of control",* and the staff (N=49): *"All staff have a true passion for what they are doing and are a credit to the HM forces",* and 'help with personal affairs' (N=44): *"The fact that they work with other people so they have been able to access funds for furniture and rent and bond and deal with the housing department to get us a flat."*

A total of 214 comments were provided regarding the positive aspects surrounding TSS programme specifics. Of these, 63 cited the benefits of a range of treatments and therapies. Reported treatment and therapies described by participants included educational training courses (N=18), general activities (N=10), therapy (N=9), horse therapy (N=8), EMDR (N=6), garden therapy (N=5), and counselling (N=4). Subsequently, 64 veterans and family members were grateful, for the treatments and therapies provided: *"Once I was referred and spoke to the case manager, I knew I was in good hands. It was all very professional and fast, and I felt they could be trusted".* Comments surrounding information provided (N=11) and referrals (N=9) were positively described by veterans and family members: *"Signposted to lots of services and X has been there. He has been outstanding understands and relates."*

Figure 22. Participants Views of the Positive Apects of the TSS programmes

The third theme was cited by 107 Veterans and family members and that was the positive impact the grant holder programmes had on their health, wellbeing and social networks. Comments surrounding the positive impact TSS programmes had on their outlook on life and wellbeing were well received by 63 veterans and family members: "*Access to MH services and support. With help I have regained perspective and self-esteem this has allowed me to gain control of my life and deal with my issues"*, and 32 participants reported enjoyed bonding with other veterans, meeting new people and getting out: "*Meeting new people and getting out", "I think bonding with other veterans."* The family component was also provided: *"Art therapy has been so impactful for my daughter, and she has started talking to me more, and we can have open discussions.* See Figure 22.

Ways to improve the programme

Veterans and family members provided details that described ways to help improve *TSS* programmes. The three areas most reported aligned to the support provided, the programme specifics and health, wellbeing and social networks. See Table 24.

Three elements to improve TSS	Specifics	Individual frequency	Total
Support Received	More contact and follow-up	12	65
	More Face-to-Face	10	
	Better access to help and support	8	
	Long-term support	8	
	More staff	6	
	Improved information sharing	5	
	More time	5	
	More Support	5	
	Better trained staff	3	
	First point of contact	1	
	Listen to veterans	1	
	More veteran staff	1	
Programme Specifics	More Funding	16	63
	Programme Extension	10	
	More Facilities or Improvements	9	
	Activities for and with other veterans	6	
	Increase programme awareness	5	
	Improve programme availability	4	
	Choice of activities	3	
	More content	3	
	More privacy	2	
	Various settings	2	
	Drop-in sessions	1	
	Improve support materials	1	
	More group activities	1	
Health, Wellbeing and Social Network Specifics	Help with personal affairs	11	14
	Meet other families	2	
	Social events	1	

Table 24. Three elements that could be implemented to improve TSS proprogrammes

Sixty-five veterans and family members highlighted ways to improve the *TSS* programmes These included more contact and follow-up: *"I would like a phone call in a few weeks to check in with me."* As a result of the Covid-19 lockdown restrictions, ten participants did not favour the telephone calls offered and would have preferred more face-to-face interactions: "*the only problems were caused by Covid and not being able to connect or meet face to face,"* In addition, better access to help and support, long-term support and more staff was also expressed by veterans and family members*: "fast track pathway to accommodation/ treatment", "more longevity in accessing support over a longer period", "More full-time staff to cater for the ever-increasing demand for this unique mental health education and training service"*. See Figure 22.

Figure 22. Particpants Views on how to Improve the Programme.

Participants cited the need for more funding to help and support *TSS* programmes: *"More funding to better support administration functions", "Greater funding to enable full-time peer trainers"*. The need for more or improved facilities (N=10) and programme extension (N=9) was also suggested by veterans and family members: *"facilities - lack of an office or building where we can meet in private and in social groups", "I would like the peer mentor to work with me for a longer period"*. Veterans expressed the desire for more activities with other veterans (N=6): *"Activities for veterans in the local area", "Club activities with other soldiers"*. Veterans and family members suggested improvements with regards to personal affairs (N=11); issues surrounding finances, housing, employment and help with transport to appointments were mentioned by

some participants: *"Finance help, housing options", "communication with advisors, all of the help looking for work and support from XXX around welfare issues."*

Additional Comments and Feedback

Eighty veterans and 6 family members provided additional comments and feedback to best support their answers provided in the questionnaire. Issues raised included 16 comments relating to assistance with the study questionnaire: *"I am under the influence of alcohol most days. My peer mentor is explaining the questions to me. Help reading and completing answers on paper"*. Ten participants found the questionnaire time-consuming and 5 did not like the inclusion of psychometrics or questions. Despite the programme satisfaction being high (details below), the exit questionnaire comments revealed small number of eight participants being unhappy with their programme and the support received. The impact of Covid-19 (N=4) made it difficult for some participants to access activities and receive face-to-face support: *"Was difficult as the activities were delayed and altered because of Covid so it would be good to see the horseback activity at full capacity with families", "Covid has made things hard for WWTW to deliver face to face but otherwise I can't think of anything else"*.

Ex-Armed Forces personnel commented on their previous military career (N=15). Following post-service, 12 participants described feeling let down by the MOD or abandoned by the Armed Forces: *"But I feel I was treated very badly by the MOD when I left. I have no faith in the MOD. I have been fighting them about my PTSD and it's only 3 years ago since I got 100% pay-out. The put me through hell*". Additionally, 5 veterans described the lack of help and support once they left the Armed Forces: "*I am angry at the Army and DCMH as I do not feel they have given me the support and treatment I need". "I never really considered how much military service has affected me until I had a conversation with my Peer Mentor a fortnight ago. I have thought about it since and understand better how these past events, like a serious parachuting accident, have added to my failing mental health now. I have realised I cannot cope with all this on my own anymore"*.

Northern Ireland veterans revealed the long-lasting impact their service had on their MH and current lifestyle (N=9): *"Although the troubles in Northern Ireland was in 1970, I still get flashbacks of the bombs and bad times when I served in the UDR", "I am not sure that people in mainland UK understand our problems, we haven't been taken off the field of conflict and still live in the area where we were attacked. I see the terrorist who carried out the attack on a daily basis as they are living in my neighbourhood, meet them in shops, banks etc I walk the field of conflict daily with all its memories."*

“

"I found the programme very useful. The people are very understanding and kind. All will go out of their way to help everybody. I would recommend that this would be the first point of call for any ex-service personnel in need of advice."

"Tremendous help. I feel like a different person. Extremely helpful and totally understanding of the military life. I would highly recommend to others who have been in the military."

"Access to MH services and support. With help I have regained perspective and self-esteem this has allowed me to gain control of my life & deal with my issues."

"It has been excellent, I've had more help from X at X than any other organisation put together."

"Group equine therapy was great because all the others were from a military background."

"Art therapy has been so impactful for my daughter and she has started talking to me more and we can have open discussions"

"Having a non-judgemental professional to talk to in private"

"I am not in this alone, and, that help is available through options for sign-posting to other services"

"Encouragement to expand my social network and move away from isolation."

”

"I DON'T KNOW WHAT I WOULD HAVE DONE WITHOUT THE SUPPORT FROM THE MENTOR AND PEOPLE I WAS INTRODUCED TO, THE MENTORING HAS BEEN VERY EFFECTIVE, HAVING SOMEONE WITH KNOWLEDGE, CONTACTS AND EXPERIENCE WHO CAN ALWAYS TALK SENSE TO ME, GET THE RIGHT HELP AND STOP ME FROM LETTING MY ANGER GET OUT OF CONTROL"

Westminster Centre for Research in Veterans | University of Chester

Case Study 8: Solent NHS

Alfie is a 53-year-old Army veteran who served in the artillery as a reservist for 16 years including service in Bosnia and the First Gulf War in Iraq/Kuwait. He was medically discharged from the Army following a shoulder industry sustained in 2011. He has struggled with his physical injury since that time and feels let down by the Ministry of Defence for the way he was discharged. Alfie was previously married but his time in service contributed to the breakup of his relationship. He is currently living in a shared house in Portsmouth and is working full time as a HGV driver.

Alfie presented to Positive Minds in February 2020 after visiting his GP and being signed off work sick with stress and anxiety brought on by a work-related issue. Alfie was refused entry into the Dockyard as he refused to allow a security officer with Ferryspeed to inspect his lorry cab. Alfie was verbally aggressive to the security officer and offered the use of violence. This resulted in Alfie being suspended from work pending a disciplinary investigation.

This situation caused extreme stress to Alfie as he was worried about his job and finances. During his first session with Positive Minds, Alfie stated he was disillusioned with his job and wished to find something else to do.

Alfie was referred to Talking Change and undertook an 8-week anger management course completing June 2020. During his review in July 2020, Alfie stated he was engaging with SSAFA and Veteran Outreach Support for legal advice to support with his ongoing work issue. Positive Minds referred Alfie to Citizen's Advice for additional financial and legal support. Additionally, our team made further referrals to Regular Forces Employment Agency and Solent Mind Employment team for support with Alfie's job search.

In August, Alfie was called by Positive Minds for a wellbeing catch up and he expressed he was not doing really well. He was invited for a face to face. Our team requested a sick note from his GP and found him support claiming universal credit. We also advised him to contact Veterans UK to claim war pension based on his shoulder injury sustained whilst on duty. Throughout this time, our team of Veteran Advisors conducted welfare calls fortnightly.

Alfie returned to work September 2021 following a decision on no further action over the disciplinary hearing. He signed up with Solent Recovery College to complete veteran specific courses.

As Alfie still wanted to find new employment, we got in touch with the Poppy Factory. However, the Poppy Factory would only take unemployed veterans, so our team reached out to Talking Change and asked them write a letter in support. The letter was accepted by the Poppy Factory, and we arranged for them to use the Positive Minds premise to meet.

Alfie was discharged from Positive Minds in June 2021. He is in a much better place and grateful for the support provided by the Positive Minds team.

Baz is a 52-year-old Army veteran who served in the Intelligence Corps and Logistic Corps for 22 years incorporating tours of duty in Iraq and Bosnia. He is currently employed as civil enforcement officer. In 2019 he was assaulted on duty suffering a jaw injury resulting in surgery. Since the incident Baz has suffered increased poor reactions to hostile confrontations at work, bad dreams and flashbacks. Although not having obtrusive thoughts he does feel increased and severe anxiety and stress whilst at work. This is also impacting his home life with being short tempered with his partner. Baz was also awaiting a disciplinary investigation from work concerning his reactions following the assault in so much that he refused to work on his own and not during hours of darkness.

When Baz registered with Positive Minds in March 2020 he was suffering with high levels of anxiety, anger and low mood.

It was noted from his records that his service medical records were not present on SystmOne. Our team of Veteran Advisors advised and arranged for Baz's service records to download to SystmOne via his GP surgery and Defence Medical Service.

After his extended conversation, Baz created a goal plan review which included attended engaging in veteran specific workshops and engaging with Talking Change. Unfortunately, he did not engage with Talking Change and he was discharged from their service.

Throughout the pandemic, Positive Minds offered welfare calls to Baz and when we returned to face to face delivery had a few in-person sessions.

He received good news that the disciplinary was dropped. This situation made him realise he wanted a change in roles and decided to work with the Poppy factory.

Exit Data

Details at Exit: The total number of exit questionnaires received by all the grant holders were N= 254. Of these 254 exit questionnaires, 233 were planned exits (92%), whereas 16 were early exits (6%) and five were missing data.

Analysis shows improvements over time from entry to exit of the programmes in participants health and wellbeing (Table 25). Results reflected a decreased in the levels of self-reported Stress in the VAS (t (227) = 4.37, p = <.01), and in the number of self-reported symptoms from 10 to 4 (p < .01), number of self-reported factors from 5 to 2.9 factors (p < .01), and the number of self-reported illnesses currently affecting then from 3.21 to 2.78 (p = .01).

Serial	Variable	Variable info (Score range)	Mean scores	
			Entry	Exit
1	Stress VAS	Self-reported level of stress on questionnaires (ranging from 0 = no stress to 10 = maximum distress).	7.60	6.65
2	N symptoms	The number of self-reported symptoms ticked on questionnaires (ranging from 0 = no symptoms to 18 = maximum number).	10.15	4.51
3	N factors	Number of self-reported factors / stressors ticked on questionnaires (ranging from 0 = no factors to 18 = maximum number).	5.03	2.93
4	N illnesses	The number of self-reported physical and/or mental illnesses currently affecting them ticked on questionnaires (ranging from 0 = no illnesses to 10 = maximum number).	3.21	2.78

Table 25. Changes between psychometric means scores at Entry and Exit

The exit questionnaire captured information regarding satisfaction rates. The combined veteran and family results indicated high programme satisfaction rates were reported by the majority of respondents (both veterans and families), and no significant differences were found between grant holders; see Figure 23).

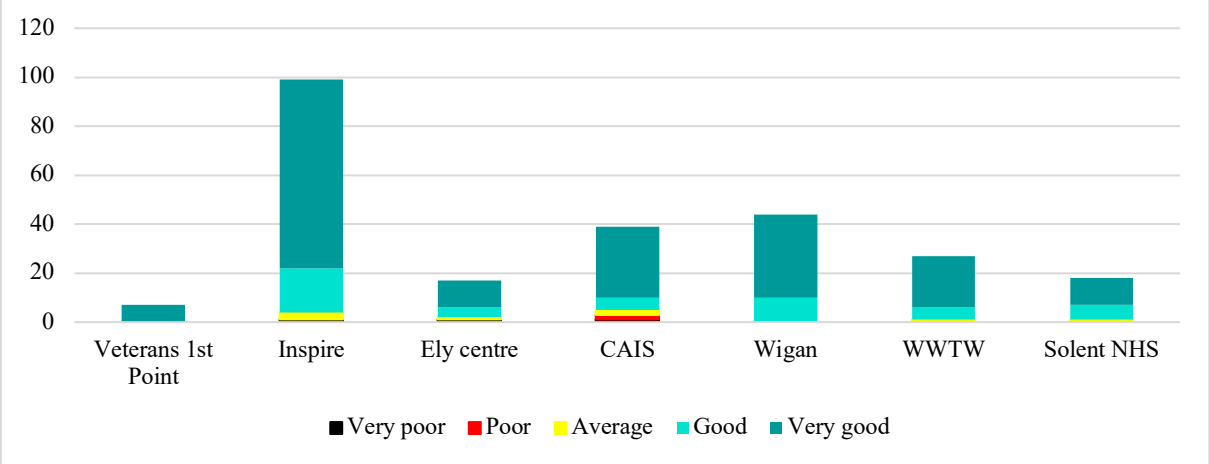


Figure 23. Participants satisfaction by the Grant Holders

Of the 251 participants who provided feedback, the overall experience was rated on a 5 point Likart scale ranging from very poor to very good. Over, 95% of respondents provided a positive score of very good and good. This consisted of three quarters of respondents provided the highest score of 'very good' by 190 participants (76%), 'good' by 48 (19%) participants, 'average' by 8 (3%) participants, 'poor' by 2 participants (1%) and 'very poor' by 3 participants (1%). In regards to the support offered; from 253 participants who provided feedback there were positive scores from 94%. This comprised of 'very good' by 206 participants (81%), 'good' by 32 (13%) participants, 'average' by 10 (4%) participants and 'very poor' by 5 individuals (2%). The same number, 94% indicated a positive score for programme information. This was comprised of 'very good' by 188 (74%), 'good' by 52 (20%), 'average' by 8 (3%), 'poor' by 2 (1%) and 'very poor' by 3 (1%) individuals. The project administration was rated with a positive score from 93% of respondents and 'very good' by 192 (76%) participants, 'good' by 44 (17%), 'average' by 10 (4%), 'poor' by 4 (2%) participants and 'very poor' by 3 (1%) individuals. The project facilities were rated by 252 participants and positive scores provided by 88% with "very good' by 151 (60%), 'good' by 70 (28%) participants, 'average' by 24 (9%), 'poor' by 4 (2%) participants and 'very poor' by 3 (1%) individuals. There were 246 veterans and family members who completed an exit questionnaire reported and 204 (83%) participants knew how to make an official complaint, 42 (17%) did not. Then 107 participants provided feedback on the programmes positive impact of their quality of life (QOL) and scored this with a mean of eight (ranging from 0 no impact to 10 maximum impact).

Participants reported being engaged in a number (a mean of two) of different interventions, mostly individual MH therapy or counselling (N = 181, 71%) such as EMDR or CBT, group activities (N = 89, 35%), MH assessments (N = 58, 23%), MH medication (N = 20, 8%), and other activities (N = 34, 13%), such as help with housing and employment, education courses, family mediation, or participation to Equine or Art therapy, and 200 (79%) participants rated these interventions as appropriate.

Social Economics Evaluation

EQ5D-5L information was completed by 477 participants on entry and 194 on exit, 130 provided WPAI information. Overall the mean EQ5D index score was 0.51, with veteran participants lower at 0.49 and family/carers higher at 0.6 (values taken on entry into study). The EQ5D measure ranges from quality of life equivalent to death, to perfect health (0-1), with negative scores possible. For both groups, EQ5D showed poorer quality of life at entry of the programme relative to exit, with a higher proportion of veterans experiencing problems in comparison to family/carers. Out of 391 veterans completing employment information, 131 (34%) were currently working for pay, 130 provided information on Presenteeism (% work time missed). Work productivity impairment was higher in family/carers than in veterans (28% vs 22%). Outcomes were analysed on entry to the study.

Overall, analysis on Quality of Life and Work productivity indicates a need for support in this population. Veterans reported poorer quality of life than family/carers in this evaluation, although family/carers reported higher levels of work impairment. These may, however, be attributed to sample size differences.

Cost-Utility model parameters

Health States and Transition Probabilities

In the construction of the social economics evaluation, the available cohort was split into symptom-severity categories, which functioned as health states, as defined by each participants PHQ-9 score (Table 26). The categories were scored: 0-9 (none/mild), 10-14 (moderate), 15-19 (moderately-severe), 20-27 (severe).

					PHQ-9 score				
Questionnaire	**PHQ-9 category**	**N, % Veterans**	**Mean age**	**Gender (N males)**	Pre	Post	**Change in PHQ-9**	**EQ-5D**	**N employed**
ENTRY	**Mild**	92 22%	47.5	83	5.2	5.5	0.2	0.72	42 51%
	Moderate	87 20%	48.9	75	12.1	7.6	-4.6	0.53	28 37%
	Moderately-Severe	93 22%	45.8	84	17.1	6.9	-10.2	0.50	27 32%
	Severe	154 36%	48.0	148	23.4	12.2	-11.1	0.32	33 23%
EXIT	**Mild**	115 59%	48.1	98	14.3	3.8	-10.4	0.56	36 37%
	Moderate	40 21%	52.2	33	17.5	11.9	-5.5	0.39	10 32%
	Moderately-Severe	23 12%	50.0	22	18.9	17.0	-1.8	0.29	6 29%
	Severe	16 8%	48.3	16	21.9	22.4	0.5	0.33	5 38%

**N veterans with complete PHQ-9 severity data, n=22 missing (Entry) n=19 missing (Exit).*

***N veterans who completed PHQ-9 with complete employment data, n=40 missing (Entry) n=32 missing (Exit).*

Note: above outcomes are based on veterans with complete data per outcome.

Table 26. Health State Description

Transition probabilities within the model were calculated using the likelihood that participants changed severity health state over time through completion of the programme; the entry-exit transition was measured (Table 27).

FROM	TO					
	HEALTH STATE	**Mild**	**Moderate**	**Moderately -severe**	**Severe**	**Dead***
	Mild	0.70	0.13	0.13	0.04	0.02
	Moderate	0.68	0.24	0.08	0.00	0.02
	Moderately- severe	0.80	0.10	0.07	0.03	0.02
	Severe	0.49	0.21	0.15	0.15	0.02
	Dead	0.00	0.00	0.00	0.00	1.00
	**Dead being the standard term used within the economic modelling*					

Table 27. Transition Probabilities

Veterans completing the entry questionnaires acted as the control arm for the 'treatment' or programme arm. The health state captured on entry was assumed to continue steadily over time without participation in the programme. Figures 24 and 25 illustrate how participants in the control and treatment arms passed through the model over time.

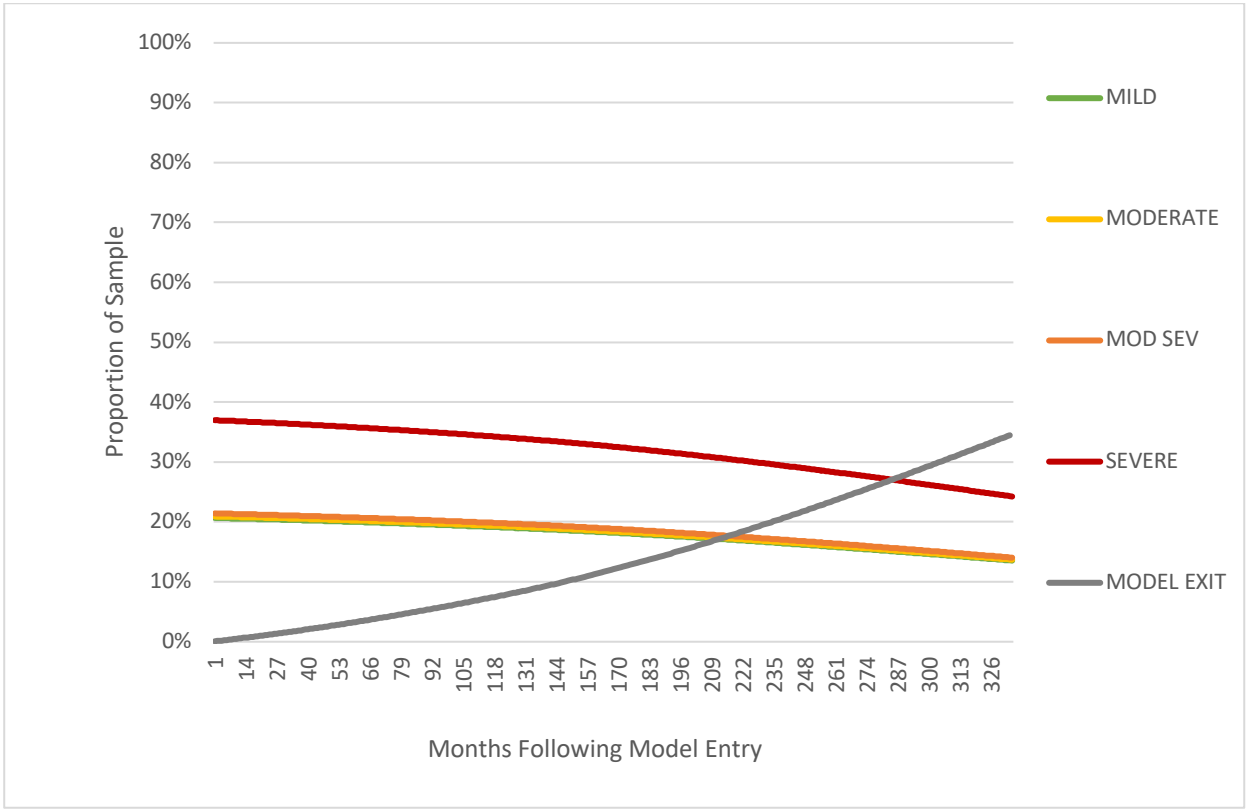
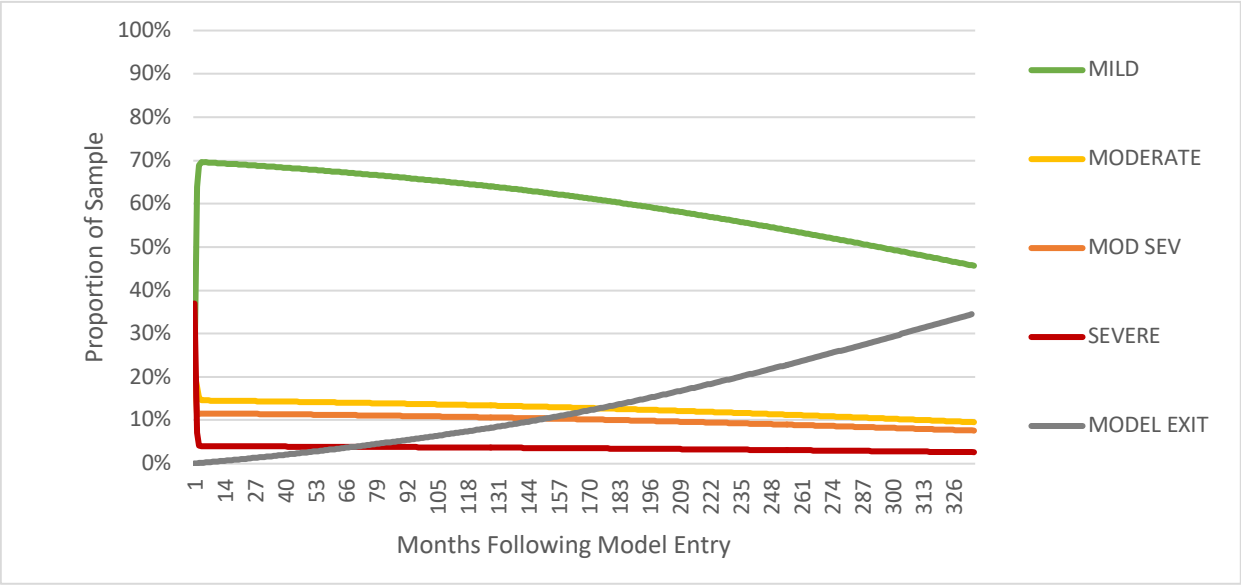


Figure 24. Health State Transitions (Control Arm)



Quality of Life

As measured by the EQ-5D tool, the quality-of-life score increased consistently with worsening health state (Table 28), as might be expected, which indicates the impact the symptoms have on the participants' lives and ability to function.

Cost-Effectiveness Outputs

The key outputs from the cost-utility model were the per-person cost and Quality Adjusted Life Year (QALY) gain, measured using the incremental cost-effectiveness ratio (ICER). Table 28 summarises four scenarios carried out. Each scenario represents a differing time horizon of the model, as well as a cost perspective. The principal outcome here is the ICER, from which we can see a value across each scenario below £30,000 per QALY.

		Scenario 1		***Scenario 2***		***Scenario 3***		***Scenario 4***	
		Programme	**Control**	**Programme**	**control**	**Programme**	**Control**	**Programme**	**Control**
	Costs (£)	£27,380	£26,839	£11,560	£7,125	£45,090	£53,432	£13,641	£13,969
	QALYs	0.65	0.49	0.65	0.49	1.29	0.97	1.29	0.97
INCREMENTAL	**Costs (£)**	£541		£4,435		-£8,342		-£328	
	QALYs	0.15		0.15		0.31		0.31	
	ICER (£)	£3,565		£29,236		-£26,708		-£1,051	
	Time horizon	1yr		1yr		2yr		2yr	
	Cost Perspective	Societal		Health care		Societal		Health care	

Table 28. Cost-effectiveness Outputs

Results from the cost-utility model show that in all time horizons tested (1-2 years) and cost perspectives taken (healthcare and societal), the programme was cost-effective regarding the £20,000-30,000 threshold applied in the NICE reference case (National Institute for Health Care and Excellence (NICE), 2013). When considering the societal cost perspective, the results show incremental savings from a 2-year time horizon, meaning that there was a saving to society, along with an increase in participant QALYs. Outcomes measured using the healthcare cost perspective also show cost savings from year 2. The results calculated included the research grant funds associated with set up costs. If the programme were to continue, there is strong reason to believe these per-person costs would only diminish over time, and the programme would improve further in cost-effectiveness.

Case Study 9: Solent NHS

Graham is a 69-year-old Royal Navy veteran who served as a chief petty officer for 24 years. He saw active service during the Falklands war. He met his wife locally and eventually settled in the Portsmouth area where his son also lives who is also suffering with PTSD. Graham has a second son living Winchester. Graham retired 4 years ago from the aerospace industry, and he was enjoying his retirement until unfortunately his wife passed away in 2020. He is living in a large flat in Fratton which he is struggling with financially and holds too many memories of his deceased wife. Graham also has numerous physical issues including reduced mobility and heart problems.

He presented to Positive Minds in February 2021 initially by phone after seeing his GP due to a fall through a coffee table. He presented as isolated, lonely, and suffering with bereavement, stress, and anxiety. His main priority was getting some help with his general anxiety and depression and exploring veteran support available for a possible move into sheltered veteran accommodation. He had previous dealings with SSAFA with financial help for wife's funeral.

Whilst Graham had explored housing options, as he has no internet access and was isolating due to Covid-19, his options were limited. Our team of Veteran Advisors supported Graham through making various referrals. The first referral was to Talking Change and CRUSE bereavement for mental health and wellbeing support. Talking Change accepted the referral and was offered support through their long-term conditions pathway. He also received bereavement support from CRUSE.

The Positive Minds team began exploring accommodation options and found vacancies at supported living with CESSA homes for veterans. We supported Graham by sending his paperwork to CESSA housing. We also reached out to veteran organisations such as VOS, and adult social care and the Royal British Legion for support for a panic alarm for Graham due to his health conditions. He was afraid he would fall and injure himself again and not be able to call for help. We were able to successfully help him with this.

Discussion

In 2018, the Armed Forces Covenant Fund Trust (the Trust) allocated in the region of £4M to seven projects to address the problems caused by serious stress in veterans, their carers and families. The *Tackling Serious Stress* (TSS) programme was designed to improve the wellbeing of veterans, their carers' and families whilst addressing the possible barriers to accessing health care. The rationale being that if veterans and their families are provided with these appropriate interventions, within an environment that values leadership and that tackles stigma, then stress can be effectively managed. These projects commenced between May and October 2019 and concluded in September 2021. The University of Chester's (UoC) Westminster Centre for Research in Veterans (The Centre) was selected to support the grant holders and complete an independent evaluation of the TSS projects.

Following an open call, the Trust received 34 applications and an independent expert panel recommended the 7 TSS projects to the Trust Trustees who then awarded the grants. These were: CAIS: The All Wales Veterans and Wellbeing Centre; The Ely Centre and Inspire in Northern Ireland; Veterans First Point in Scotland and Walking with the Wounded, Wigan Council and Solent NHS Trust in England. These selected grant holders would work with regional delivery partners and accept entry into programmes through multiple routes including self-referrals, statutory bodies or Charities. The TSS projects were selected with a focus on the quality of the interventions rather than the number of participants. There were 970 participants enlisted onto the 7 programmes and they were given the option to complete a study questionnaire at both entry and exit from the programme and 800 questionnaires were received. From the outset, representing the participant's voices was a key part of associate working along the customer journey, welcoming participants as equal partners in conjunction with any other collaborator.

Engagement

The engagement with grant holders is covered in detail in the methods section above. But it is worth re-iterating the benefits of using an evaluator team not just to analyse the data but to actively engage in the programme. This commitment and support can help motivate grant holders to provide the questionnaires but also to connect with each other. Each grant holder was visited and then webinars proved a novel and especially useful way of connecting grant holders and sharing learning to provide real time data. This information indicated what was helping beneficiaries and was an aid to identifying how challenges were being addressed. These developments were then highlighted in E-Bulletins that could be shared with the study participants. Feedback indicated that the military background of The Centre team was well received by the participants and helped with an understanding of the lived experiences of the

AFC. This was the first time such an approach had been adopted by the Trust and this report demonstrates the improvements for beneficiaries' health and social interactions.

The results demonstrate that overall the *TSS* programmes successfully improved the health and wellbeing of the beneficiaries by empirically reducing the number of reported physical and MH illnesses, factors and symptoms by veterans and family members. Following the programme, veterans' social networks had improved with the participants being less reliant on others and reported increased social interactions and activities. Psychometric questionnaires provided clear evidence of reductions in levels of stress, depression, anxiety and alcohol consumption and improvements in wellbeing.

Their projects offered a mixture of different options including psychotherapeutic interventions such as Cognitive Behavioural Therapy, group activities, social prescribing events such as Equine Therapy, mentoring and educational courses and practical help with housing and employment. There were notable differences regarding the support offered by different grant holders but all achieved levels of success. Many of the beneficiaries had previously accessed both statutory and non-statutory services and therefore the grant holders dealing with the multifactorial stressors leading to the distress in the participant group needed a base of empathy, understanding and the ability to immediately engage to ensure an appropriate assessment and for the client/s to want to return for more.

In Northern Ireland, the Ely Centre delivered support to beneficiaries by individual support, such as talking and complementary therapies (e.g., gardening) via the *Brooke House* project in the private rural setting of Colebrooke Park estate. Similarly, Inspire delivered trauma-related psychotherapy. For example, some participants participated in Equine Therapy, counselling (understanding post-traumatic stress disorder for families), Blossoms Garden Therapy, and mindfulness.

In Wales, the Change Step programme delivered by CAIS provided all participants with peer mentors who managed and provided individually tailored support. Whereas, in Scotland, Veteran 1st point delivered programmes via Cyrenians (supporting veterans and family members to improve communication, build resilience, reduce conflict and repair relationships). Also Lothians Veterans Centre, a drop-in centre to help and provide advice for former members of the UK Armed Forces, reservists and their family members, who experienced any form of disadvantage post-service by signposting to supportive networks, such as Equine Therapy by *Horseback UK*.

In the Northwest of England, Wigan Council delivered support via the *Healthy Heroes* initiative at the Wigan Borough Armed Forces HQ, with sessions, activities, and events that supported

veterans' health and wellbeing. Similarly, in collaboration with TILS and CTS teams, WWTW supported vulnerable veterans via face-to-face sessions, targeting employability (with notable improvements) and social inclusion. Additionally, WWTW delivered many social prescribing activities (e.g. fishing) via the Calver Trust. In the South of England, Solent NHS Trust provided support via wellbeing advisors, primarily MH support as part of the Positive Minds, Talking Change and Solent Recovery College programmes.

Evaluation

The seven portfolio projects across the two years supported 970 participants including over 200 children. The evaluator questionnaire was detailed and with the psychometric questions quite long; with the entry questionnaire taking approximately 15 minutes to complete. The exit had less questions. There is always a balance between optimising the data capture and deterring a participant from completing due to the length of the survey. It was therefore encouraging that 578 veterans and 120 family members provided additional comments to best support their answers provided in the questionnaires. The additional comments provided by participants provided insight to help support the Likert tick scale answers with additional information captured in the questions on the best aspects and the challenges.

A total of 800 questionnaires were collected from the seven grant holders including 254 were exit questionnaires. From these, 546 veterans and 98 family members completed the evaluation questionnaire and 15% (N=84) were living in Wales, 36% (N=195) in Northern Ireland, 43% (N=234) in England and 6% (N=33) in Scotland. Some grant holders, in particular, Inspire and Wigan, showed stable uptake throughout the programme, however, reductions were observed from March 2020. This was related to the COVID-19 pandemic and the associated lockdown measures imposed by the government to reduce the spread of the virus (schools, restaurants, entertainment venues, and shops were closed, except for essential businesses (World Health Organisation, (WHO), 2021). Along with many aspects of the programme, the evaluation had to change as well to accommodate the challenges faced. An example being that before the pandemic the participants favoured completing hard copy paper format questionnaires, but this moved significantly to online formats after March 2020. That large periods of this programme faced practical challenges presented by the COVID-19 pandemic cannot be over-stated, especially as many grant holders had to switch to remote working and cancelling key group activities. It was to their credit that many challenges were circumnavigated and they continued to provide veterans and their families with care and support. However, these challenges did negatively impact on the number of completed questionnaires.

Participants

The veteran participants were predominately white British males, with a mean age of 49 years. whereas family members were primarily female spouses or partners aged 44 years. There were differences between grant holders. In NI participants were on average older than those in other programmes and those in the North West of England were younger. The mean age of TSS participants was younger than the overall median age of UK veterans, as 60% are aged 65 years old or over. In addition, TSS programmes were designed and targeted to support veterans and family members with specific characteristics which would impact on the recruited audience but does leave a gap regarding support to the older veterans. In particular to veteran's spouse whose lifestyle can be seriously affected by the terms for a veterans pension entitlement. During a military career, a veteran and his/her family face regular moves including having to live overseas. In addition, Service-personnel spend long periods of time away from their home due to operational tours and training exercises. The longer the soldier serves, then the greater the number of moves and the greater the level of separation. The result being that their spouse's education and employment profile is negatively impacted upon, and their ability to build a career and a pension is reduced. For the service-person, the longer they served, then the better their pension is; but when the veteran dies their spouse is only entitled to 50% of that figure. Service -personnel are approximately 90% men, and males in the UK die around 4 years younger than women (Men 79.4 and women 83.1). Therefore, women generally outlive their partner, and have to try and survive on half the pension. For a veteran on end of life care; the knowledge and distress that his death may lead to financial hardship for his wife or partner is clear. In his first week in office, Prime Minister Boris Johnson established an Office for Veterans' Affairs at the heart of government with the message that the UK was to become "the best place in the world to be a veteran". For many elderly veterans they would rather it was the best place in the world for their wife or husband. In particular, supporting these elderly women by providing support including their full husband's full pension would go a long way to achieving that.

MOD (2019b) data indicates that 99% of veterans are white and that was replicated in this study. However, there is therefore room for future initiatives to engage with the minority ethics who form 9.2% (N=13,690) of the British Armed Forces (Ministry of Defence (MOD), 2021) but who were under-represented in this study that was predominantly White-British (veterans: 95% and family members: 81%) and Christian (veterans: 58%; family members: 49%). This is line with national figures.

Service History

Research has shown increases in MH issues in specific sub-groups of service. For example, ex-personnel or veterans with combat experience (Fear et al., 2010; Osório et al., 2017), as well as those associated with operationally linked trauma (Ashcroft, 2014), injury (Forbes et al., 2010), early service leavers (Buckham et al., 2013; Bergman et al., 2016), and reservists (Harvey et al., 2012). These groups have been recruited within the TSS programmes, where 87% had served in the British Army and the same percentage were Regulars; with 51% leaving as a Private soldier or equivalent. On average, they served for 10 years and 79% had completed operational tours with the same amount having experienced a traumatic event. That they were overall well supported is a positive outcome, although the longer term impact would require a longitudinal study to establish.

78% of veterans enrolled on the *TSS programmes* conducted an average of two OT (mainly in Northern Ireland); 79% were previously exposed to traumatic events during service (60% conflict/contact situations), which were rated as highly stressful. Correlations confirmed a relationship between service linked trauma and operational tours, self-reported depression, anxiety and PTSD. However, service linked trauma was predominantly reported by more participants in NI, Wales, and in the North West of England. Moreover, only 9% of the veterans enrolled were reservists, and 6% were early service leavers (ranging from 4 months to one year).

Most veterans (65%) were discharged for non-medical reasons such as reaching the end of their contract (30%) with 29% medically discharged due to a combination of physical and MH issues. This key finding agrees with previous veteran and civilian population literature, and the major cause of MH disorders (stress and depression) is related to physical ill-health (Kang et al., 2015; Mitchell et al., 2009; NIMH, 2018). Veterans that were exposed to trauma during service self-reported higher stress, physical and MH illnesses than those who self-reported lower stress scores.

Physical and Mental Health

The majority of both veterans and family members reported long-standing physical or MH illness. Aligned with national estimates (Ministry of Defence (MOD), 2019b), veterans mostly self-reported physical injuries such as musculoskeletal injuries (7%) and hearing difficulties (21%). Veterans also self-reported high rates of anxiety (67%), depression (67%), and PTSD (62%), these poor MH findings are in line with previously reported literature (Fear et al., 2010; Finnegan et al., 2014; Goodwin et al., 2020; Giebel et al., 2014; Ministry of Defence (MOD), 2020; Rhead et al., 2019). However, the findings presented are higher than the typically reported estimates for

veterans MH determinants which were probable due to the veteran target audience these programmes focused on and that these were self-reported.

Significant differences between grant holders were observed for veterans' reported physical and MH illnesses. Veterans from NI reported more physical and MH illnesses than veterans in Scotland, Wales and the South East of England. In addition, veterans from NI were more susceptible to issues related to Musculoskeletal, Hearing, Depression, Anxiety, PTSD; however, sample size differences must be acknowledged. Family members reported similar illnesses, with the majority self-reporting anxiety (68%) and depression (57%). These findings agree with previous literature; females are susceptible to depression and anxiety (NHS), 2016; World Health Organisation (WHO), 2018; Baker, 2020). As expected significant relationships between physical and MH variables were found; musculoskeletal with: PTSD, depression,; and also anxiety, as well as hearing with PTSD, and depression with anxiety.

To examine the effectiveness of the *TSS* programmes, changes over time (at entry and exit of the programmes) between reported variables and psychometric questionnaire scores were analysed. The psychometric questionnaire scores validated the self-reported health findings; veterans and family members exhibited moderate-to-severe depression and anxiety at entry of the programmes. Results showed a reduction in the number of reported illnesses, self-related stress scores and psychometric scores following the TSS programmes. Significant changes were observed with the number of reported illness, stress VAS scores , and wellbeing scores. The findings provide some reinforcement to the studies that have indicated variety of interventions / and or social prescribing activities may help to improve outcomes in veterans including mindfulness, yoga, sports, horticultural or archaeology activities, self-compassion, or educational courses (Cabral et al., 2011; Finnegan, 2016; Stanton et al, 2014; Steen et al., 2021; Wise, 2015). These findings demonstrate the successfulness of TSS programmes for improving the health and wellbeing of veterans and their families members. It is also clear that the programmes successfully targeted and recruited the intended population.

It is essential to identify and understand the situational factors associated with stress in veterans and family members; yet the majority of studies use the diagnosis as the starting point or focus on particular issues such as family issues or financial issues although there are often more than one. Previous civilian studies have shown that stress and depression are associated with multiple interacting factors such as physical illness, family or relationship problems, social isolation, employment, and poverty (Cruwys et al., 2014; Hughes et al., 2017; Lund et al., 2010; NIMH), 2018; Vos, 2016). Similarly, within the Armed Forces (irrespective of rank, age, and gender), common underpinning factors associated with MH issues include family or relationship problems (Bohman et al., 2017; Lindert, Weisskopf & Spiro, 2018; Finnegan et al., 2014), and occupational issues that are not military-specific, such as unemployment (Finnegan, 2011; The Royal British Legion (RBL), 2014; Theorell et al., 2015). Some veterans also find the transition from military to

civilian life difficult, especially in the presence of financial, housing, and employment difficulties (Ashcroft, 2014, 2017). The TSS data collection methodology therefore set out to identify which stressors were impacting on participants enrolled in projects.

No correlations were observed between the gender or age of veterans and the number of reported predisposing factors except for males and operational factors and childhood factors. Correlations between age and specific predisposing factors indicated that older veterans (those over 50 years of age) were more susceptible to factors such as operational factors, previous unresolved trauma, and alcohol/substance abuse compared to younger veterans.

With regards to self-reported VAS levels of stress, correlations were found between self-reported VAS levels of stress and the number of reported predisposing factors. Veterans who reported high-stress levels reported more predisposing factors than less stressed veterans. This has important implications for clinical assessment, treatment and successful outcomes. Detailed assessments should positively identify all factors leading to the client's distress. By addressing even one in a timely fashion can have a significant bearing on the individual, and re-energise and motivation them to address other issues. Therefore programmes that concentrate on certain issues such as employment can have much wider benefits.

The differences between the veterans and their families was to be expected. On entry to the programmes, the veterans reported on average five significant predisposing factors and family members four. These included family stress (54% by veterans and 81% by family members) previous unresolved trauma (54% and 48%) traumatic exposure (54% and 40%), relationship problems (35% and 48%), isolation (35% and 26%) and physical problems (26%). By capturing this data, the results demonstrate significant reductions in the causative situational stressors for veterans and family members which is a clear indication of the success of the programmes. It also confirm the assertion that a stressor on one member of the family impacts on all the family, and reinforces the wider requirement for similar programmes engaging with the whole family. The TSS evaluation was not designed to include children although this again should be considered in future programmes. More research is needed to explore causation.

Veterans reported an average of 10 symptoms and family members eight. These were similar and included veterans reports of anxiety (80%), sleep disturbance (75%), loss of confidence (70%), poor concentration (64%). These symptoms are concurrently linked to depression (NICE, 2015; NHS 2016; World Health Organisation (WHO), 2018). The effectiveness of the programmes was again reinforced with a significant reduction in symptoms from 10 to 4; improvements representing palpable benefits for the participant. Correlations were found between self-reported VAS levels of stress (low, medium, high) and the number of predisposing symptoms.

Veterans who reported high-stress levels reported more predisposing symptoms than those who were less stressed (p<.001).

These results supported previous research that suggests men and women experience depression in similar ways but present their distress differently (Baker, 2020; Branney and White, 2010). Men's symptoms often poorly correlate with the diagnostic criteria for depression, and their coping mechanisms can be displayed through anger, emotional rigidity, substance misuse or other risk-taking behaviour, and social withdrawal (Finnegan et al., 2014). These symptoms are not part of the ICD-11 classification criteria for depression (World Health Organisation (WHO), 2018), and can cause challenges to effective diagnosis and referrals (Finnegan et al, 2014).

Help Seeking Behaviour, Social Isolation, Employment and Housing

Over 60% of participants reported having previously accessed support; specifically via their GP or other MH services, but they either did not receive the provision they required or were discharged only for their problems to resurface. The TSS grant holders predominately received their referrals from the charity sector. Thus, the findings presented agree with previous literature; in that help-seeking behaviour is poor in veterans, leading to excessive delays in addressing issues, often left until they were in crisis (Combat Stress, 2017; Finnegan et al., 2018; Simpson and Leach, 2015, Randles and Finnegan, 2021). Subsequently, veterans who reported higher stress levels reported poorer help-seeking behaviour. There were still a significant 31% of veterans who were in need of help who did not seek assistance. Many found it hard to look for assistance or were unaware of the available support. Improving knowledge and access to PHC and veteran specific services together with continued investment in destigmatising MH are required to improve access to the appropriate services.

Isolation and lack of social engagement are factors that negatively impact on people's quality of life. Participants entering the TSS programme had poor social networks with over a fifth of them having no one to help them and 65% were not members of recreational clubs or organisations. The majority stated that they participated much less in social activities than people of their age. The TSS led to improvements in some social networks, with veterans being less reliant on people, and engaging more in social activities and meeting more people. For example, veterans engagement with recreational clubs or organisations increased by 10% following TSS programme exit (Entry: N=147, 33%; Exit: N=94%). Furthermore, social interactions that involved meeting people 'once or twice a week' (Entry: N=162, 36%; Exit N=86, 40%) or 'three times a week or more' (Entry: N=64, 14%; Exit N=52, 25%) increased by 4% and 11%. However, no changes were observed surrounding club or organisational engagement. The impact of Covid-19 was regarded as a significant barrier to meeting people. Veterans who reported higher stress levels reported fewer social interactions , which indicates that the grant holders were effective at

targeting the right beneficiaries. Following the delivery of the programmes, there was a significant increase in social interactions observed for veterans with regards to relying on people, meeting people and engagement in social activities. Another indicator of the success of the programmes. The findings demonstrated that veterans who reported higher levels of stress reported poorer help-seeking behaviour and had fewer social interactions. Therefore, either grant holder continuity programmes or increased arrangements with local activities should be considered.

Over 40% of participants entering the programme were unemployed compared to 33% in employment, and living in rented accommodation; whilst 31% lived alone and 7% were homeless. Those employed were earning on average 24k per year. Although the age range is different, the MOD estimates, that 79% of working-age veterans were employed, and only 3% were unemployed (Ministry of Defence (MOD), 2019b). These figures can be compared to estimates showing that 76% of UK Veterans are homeowners, and 23% live in rented accommodation (Ministry of Defence (MOD), 2019b). Again, this may be due to the specific beneficiaries that these programmes target. Older veterans reported having more stable housing status, such as homeowners or renting, and those who self-reported trauma during service reported having less stable housing status, such as homelessness, supported accommodation, shelters. The results demonstrate that some smaller groups of veterans need specific targeting and a better understanding of their life trajectory of leaving the Army. There were reports of improvements following the TSS programmes but there is room for improvement and future funded projects should consider ways of addressing these issues. That 7% (N=29) were homeless on admission to the programme and this had reduced to 2% (N=2) will be reviewed on an individual basis and the factors that have worked disseminated accordingly.

Participant Feedback

Over 95% of participants were satisfied across all programmes, indicating that the Trust selection process had chosen the right grant holders to fund. There were 94% who were happy with the support they received and the programme information, whilst 93% were positive of the programme administration. In terms of the benefits on their quality of life, the programmes were measured constructively at 8 out of 10. There were 83% who knew how to make an official complaint although the benchmark should be 100% and is an issue to be addressed for future programmes. The participants provided particularly strong feedback regarding the support they received, and the positive impact on their health, wellbeing and improved social networks. Their recommendations for improvement centred around more contact and follow-up; more funding to help and support TSS programmes and a focus on assistance with personal affairs.

Cost Effective Analysis

Results show that the programme were cost-effective regarding the £20,000-30,000 threshold utilised by the NICE reference case (NICE, 2013). The economic analysis indicated that there were incremental savings to society, along with an increase in the beneficiaries QALYs. Outcomes modelled using both healthcare and societal cost perspectives showed the programmes to be cost-effective, according to the NICE willingness to pay threshold from year 1, and cost savings reported from year 2. The results calculated included the research grant funds associated with set up costs. If the programme were to continue, there is strong reason to believe these per-person costs would only diminish over time, and the programme would improve further in cost-effectiveness.

Reflections on Serious Stress

Based on the findings from this evaluation, statutory and non-statutory organisations should consider the value of utilising the results to help shape future programmes to best support veterans their families. This is founded on de-stigmatising of MH issues and the combination of therapeutic and social prescribing interventions. The data collection process was detailed, and that level of assessment such as branch of service, operational tours and trauma can provide data for clear identification of the associated risk. The gender differences further emphasises exploring services and research for the distress or depressive symptoms in male and female veterans.

The issue of engagement with family members remains one that needs considerable focus. TSS placed as much emphasis on family members although this was not reciprocated with uptake from family members. From a research perceptive, there was frustration that despite significant partnership working with grant holders that the number of exit questionnaires from family member of 39 participants were below what was expected. This meant that an opportunity to get an original and important insight into the impact on family life were reduced. As this trend was noted, the Trust had approved a financial remuneration to increase participant engagement but this failed to improve numbers. Future services and research should aim to identify ways to access the wider AFC and explore specific facilitators and barriers surrounding reasons for poor help-seeking behaviour and programme enrolment. The potential for setting performance indicators for grant holders to achieve in relation to questionnaire uptake should be considered.

The written comments provided an insightful acknowledgement of the need for assistance and support. The participants reasons for seeking support were primarily due to 'finding it hard to

ask for help' and 'unaware of the support available' and their written narrative confirmed the problems faced. These compounding factors signify a complex network of services that struggle to promote and engage with veterans and family members that demonstrate poor help-seeking behaviour. Interventions to help identify those with poor help-seeking behaviour tendencies and increase primary health engagement and means of improving programme awareness need to be considered and further explored.

The psychometric questions in combination with the study questionnaire indicate clear improvements, but there is a requirement to be mindful that relapse rates are expected with specific illnesses such as alcohol misuse and depression (Hendershot et al., 2011; Kuyken et al., 2016) and must be considered. Therefore, further exploration and understanding of risk and protective factors are imperative to reducing relapse rates, optimising current provision, and relieving pressure on healthcare services. A longitudinal study would have provided that information, and uptake to the evaluation suggests that additional incentives should be considered in future studies.

The exit questionnaire also provided indicators that participants wanted further contact and follow-up, face-to-face sessions and welcomed support with their personal affairs. The Veterans Gateway does provide an indication of local support and better use of this facility may yet have palpable benefits. Additionally, veterans frequently stressed the importance of support and social interaction with other veterans and ex-service personnel. To better understand the provision of support and care for veterans, this necessitates understanding the unique lifestyle and specific culture within the AFC. This does make a compelling case for further investment in local community hubs and as demonstrated in the concept of the Trust's Veterans Places, Pathways and People programme.

Exit Discussions

Following the end of the data submission period in August 2021, the UoC research team held meetings with grant holders to discuss and reflect on the TSS programmes. During these meetings, grant holders summarised positive aspects of their programmes, the challenges they had faced and provided recommendation for improvements. These included discussions around client disengagement, referrals, data management, and managing and supporting clients that were fearful of leaving the programmes. Participant entry to TSS programmes finished in the summer of 2021, after which it became challenging to retrieve exit questionnaires. The COVID-19 pandemic presented practical challenges for both the grant holders and the UoC, and remote working was adopted by all grant holders, including the UoC. However, some grant holders made exceptions to meet the needs of specific beneficiaries. Moreover, most grant holders reported maintaining regular contact with their partner agencies and their clients. In contrast, some were not accepting new referrals. Moreover, due to the scope of the programmes and the

impact of Covid-19, grant holders expressed the increased backlog of questionnaires due to workload volume.

Specific issues raised included the impact of staff turnover at NHS Solent Trust. Veterans 1st Point highlighted the complexity between delivery partner referrals; participant engagement levels depended on who was referred in their programme. The impact of Covid-19 also reduced face-to-face interactions; which resulted in longer waiting times and the discontinuing of therapy services, consequently impacting attendance and service provision. Some participants did not favour online questionnaires; with older participants expressing technology difficulties and many preferred paper questionnaires. A lesson learnt was the need for specific administrative support staff, providing a person to help engage participants, including the completing exit questionnaires. CAIS reported an increasing numbers of referrals from South Wales Police, and the number of participants deemed unsuitable for the programme. providers and researchers identify specific benefits associated with these programmes. Challenges surrounding client disengagement were reported, with participants being reluctant to complete exit questionnaires despite saying they would. Some were apprehensive of their support ending following exit questionnaire completion. Exit questionnaires were distributed, but participants were often reluctant to engage once they had improved, and staff members were considerate of the potentially negative impact of chasing people and the impact on that relationship. The research team will work with each grant holder to provide individual reports to assist the service.

Limitations

The challenges presented to community based programmes caused by the COVID-19 pandemic cannot be over-stated. This presented practical challenges to the grant holders, delivery partners and the UoC evaluators. These included staffing, capacity with elongated recruitment timelines. Covid-19 also impacted on the number of questionnaires received. However, the availability of online questionnaires permitted the progression of the data collection, with many participants favouring online formats.

One challenge of understanding the results presented in this report is the sample size differences between veterans and family members; and group differences need to be interpreted with caution. Notably, some programmes such as Veterans 1st point included children although the benefits are not directly captured within this evaluation. Also, the evaluators did not have a direct bearing on influencing the completion of the questionnaire with the beneficiary.

The questionnaire delivery at entry and exit did not indicate improvement over a prolonged period of time. All grant holders identified the benefits of a longitudinal study in continuing data collection and analysing repeated observations (via questionnaires) to identify improvement / deterioration over time collection and after the participants have exited the TSS programme. However, this was not part of the evaluation funding.

The questionnaire facilitated the option for written comments and this was utilised on the majority of occasions by participants. However, a change in the evaluation methodology to include qualitative feedback would have enhanced the results. All grant holders indicated that they would welcome a qualitative evaluation for both staff and participants. This could be in the form of a series of focus groups or interviews.

The exit questionnaires did not capture the views of those who had disengaged from the programme.

Conclusion

The TSS programmes with their coordinated system of referrals, and the multiple levels of collaboration between grant holders and delivery partners successful reduced situational stressors leading to stress. This led to improvements to the beneficiaries physical and MH and wellbeing. These achievements were attained despite the significant challenges presented by the COVID-19 pandemic. The collective findings are essential to inform and help the optimisation of current provision to best support veterans and their families.

More research is needed to explore the impact of these portfolio interventions over an extended period and a longitudinal study; capturing data from participants six and twelve months after exiting the programme along with enhanced qualitative data capture through interviews and focus groups would be beneficial. The analysis demonstrated that TSS programmes were cost-effective from the first year. Across the 2-year time horizon, an increase in participant QALYs and incremental savings from both the societal and healthcare cost perspectives were observed. Future evaluations should continue to explore cost-effectiveness and a greater understanding of health economic evaluations for third sector statutory programmes may help to provide a framework to help identify key information.

The overall evaluation presents a very positive reflection of the TSS programmes. The results indicating that the TSS programmes reduced depression, anxiety, alcohol misuse and improved health and wellbeing. There is clear evidence regarding improvements for beneficiaries health, social interactions, personal affairs and overall wellbeing. Therefore, the continuation of TSS programmes or the adoption of key aspects of their delivery model within other projects and initiatives should provide better support to veterans and family members and should be considered. The report emphasises the importance of providing timely and competent support within an environment where members of the AFC feel safe. The grant holders clear commitment, motivation, intelligent application of resources alongside participant engagement led to accomplishments across the UK. The data collected within the evaluation process provides a reservoir of valuable evidence to demonstrate success and insight into projects where improvement was required, and indicators of how to redress these issues. This provides rich information of how the expenditure was successful in areas such as reducing stress by getting veterans and their families back into employment, improving their lifestyle, physical and MH and wellbeing, helping with the interface / communication with health and social care. These findings can inform other veterans with similar issues who are not seeking help.

The TSS protocol provides a template for building lasting collaborations, and identifying means for developing partnerships with leading authorities and organisations, governmental agencies, professional bodies, charities, businesses, and appropriate networks. Most importantly it presents those veterans and their families who need help with attractive options to obtain the support they require.

Recommendations

PARTICIPANTS VOICE: From the outset, representing the participant's voices was a key part of associate working, with participants welcomed as equal partners in conjunction with any other collaborator. Their feedback with over 95% providing a positive perspective of satisfaction across all programmes is significant. The participants provided particularly strong feedback regarding the support they received, and the positive impact on their health, wellbeing and improved social networks. Their recommendations for improvement centred around more contact and follow-up; more funding to help and support TSS programmes and a focus on assistance with personal affairs. Some participants preferred paper questionnaires to an online options; with older participants expressing technology difficulties.

Recommendations are that participants feedback about the means for improving their support should be built into future programmes. Satisfaction surveys should be included and bench marks set for certain criteria, such as 100% being aware of how to make an independent complaint. Participants should be given options for completing study data, with paper and online surveys and assistance if required. Also recommended is that programme dissemination plans must be designed to reach the AFC; in particular those with similar issues but were not seeking help.

ASSESSMENT: On entry to the TSS programmes; all participants significant predisposing factors and symptoms. These symptoms should be noticeable, in particular to family members and reinforces the foundation for family interventions. It is essential to identify and understand the situational factors associated with stress in the AFC such as family or relationship problems, and unemployment. Research indicates that male Armed Forces personnel experience a form of military depression, with symptoms that often poorly correlate with the diagnostic criteria for depression and these men's coping mechanisms can be displayed through anger, emotional rigidity, substance misuse, other risk-taking behaviour, and social withdrawal.

Recommendations are that contributing situational stressors should be identified in the assessment process to ensure appropriate treatment and promote successful outcomes. The presentation of depressive symptoms in men can cause issues surrounding effective diagnosis and referrals and requires staff familiar and experienced with the AFC. Also, a stressor on one family member impacts on all the family and reinforces the wider requirement for programmes engaging the whole family. By addressing even one causative factor in a timely fashion can have a significant positive bearing on the client, and re-energise and motivate them to address other more complicated issues.

HELP SEEKING and STIGMA: Help-seeking behaviour in veterans is poor, leading to excessive delays in addressing problems, often left until they are in crisis. Veterans who reported higher stress levels reported poorer help-seeking behaviour and in this study a significant 31% who were in need of help had not sought assistance. Many found it hard to look for help or were unaware of the available support. Another 60% of participants had previously accessed support; specifically via their GP or other MH services. The findings

indicate that if veterans and their families are provided with these appropriate interventions, within an environment that values leadership and that tackles stigma, then stress can be effectively managed.

It is **recommended** that assessments of people entering a programme and the subsequent evaluation should capture details surrounding the factors that negatively impact on help-seeking behaviour. Improving knowledge and access to PHC and veteran specific services together with continued investment in destigmatising MH and advertising veterans services are required to improve access to the appropriate services. Novel support with peer mentors who provide individually tailored support, drop-in centres, Community Hubs where support services are grouped together and engagement with the Police can also prove helpful. Entry into future programmes should continue to be though multiple routes including self-referrals, statutory bodies or Charities.

EMPLOYMENT and HOUSING: Over 40% of participants entering the programme with unemployed living in rented accommodation; whilst 31% lived alone and 7% were homeless.
It is **recommended** that programmes target these specific areas, to gain a better understanding of veterans life trajectory on leaving the Army and ways to prevent / address homelessness. The evaluation should measure aspects that are important to measuring success such as getting veterans and their families back into employment and improving their lifestyle.

FAMILY: TSS placed as much emphasis on family members although this was not reciprocated with uptake. The issue of engagement with family members remains one that requires needs considerable focus. The number of exit questionnaires from family member was below what was expected. This type of intervention would fail to reach the significant number of elderly widows who are often isolated and financially pressed. The **recommendation** is that future programmes specifically targets the family, including widows (not war widows).

UNDER-REPRESENTED GROUPS: Communities such as ethics minorities and reservists were also poorly recruited into this UK study. **Recommendation** that specific programmes target minority groups such as ethnic minorities and reservists.

INTERVENTIONS: TSS projects offered a mixture of different options including psychotherapeutic interventions, group activities, social prescribing, mentoring and educational courses and practical help. There were notable differences regarding the support offered by different grant holders but all achieved levels of success. It is **recommended** that future programmes continue to embrace a mixture of interventions and consider options that may suit particular beneficiaries such as support dogs or archaeology. The option for veteran peer support can help de-stigmatising of MH issues.

EVALUATION: This study highlights the importance of maximising participant recruitment into the programme evaluation and then then continued engagement into the evaluation process. Issues that impacted on client engagement included staff turnover, Covid-19 which increased backlog of questionnaires due to workload volume, longer waiting times and the discontinuing of certain therapies and the effect on attendance and service provision. Grant holders reported that exit questionnaires were distributed, but

participants were often reluctant to engage once they had improved, and staff members were considerate of the potentially negative impact of chasing people and the impact on that relationship.

Recommendations are that the timing of delivering the exit questionnaire is pivotal and this does not need to be left until the participant is just about to leave the programme. There should be specific grant holder administrative support staff to interface and engage with participants throughout the course of the project including the completion of exit questionnaires. Financial remuneration built into the strategy from the start may have improved numbers, and having defined performance indicators for grant holders to achieve in relation to questionnaire uptake. Also, using the same question set in future studies provides a platform to combine data sets and provide a resource to demonstrate success and facilitate insight into projects where improvement was required.

PSYCHOMETRIC QUESTIONNAIRES: Psychometric questions in combination with the study questionnaire indicate clear improvements in the reductions in levels of stress, depression, anxiety and alcohol consumption (AUDIT) and improvements in wellbeing. The psychometric questionnaire scores validated that veterans and family members exhibited moderate-to-severe depression and anxiety at entry into the programmes. However, there is a requirement to be mindful that relapse rates are expected with specific illnesses such as alcohol misuse and depression. Ways to use psychometric questionnaires to track this should be considered.

R**ecommendations** are that whilst this study indicated a number of positive outcomes, the longer term impact requires a longitudinal study. An independent evaluation should be embedded within all large programmes and the use of psychometric questionnaires and VAS scores can help confirm that the right group of participants were recruited to the study and reveal the effectiveness over time.

CENTRE ENGAGEMENT: Feedback indicated that the military background of The Centre's team and their insight and understanding into the lived experiences of the AFC was well received. The Centre hosted Webinars which proved a novel and especially useful way of connecting grant holders and sharing learning to provide real time data to indicate what was helping beneficiaries and to identify how challenges were being addressed. These developments were then highlighted in E-Bulletins to be shared with the study participants. This in turn can help build lasting collaborations. The **recommendation** is that future programmes should utilise the project evaluators experience' and they should be actively engaged with the programme and have a role in supporting grant holders.

COST EFFECTIVENESS: The evaluation indicated that from both a healthcare and societal cost perspective, the programmes were effective at providing incremental savings to society, along with an increase in the beneficiaries QALYs. The **recommendation** is that large projects have a specific economic evaluation.

RECCOMENDATIONS

INTERVENTIONS

It is recommended that **future programmes continue to embrace a mixture of interventions** and considers options that may suit particular beneficiaries such as support dogs and archaeology. The option for veteran peer support can help de-stigmatising of MH issues.

EVALUATION

The study highlights the importance of maximising participant recruitment into the evaluation & continued engagement. **There should be specific grant holder administrative support staff to interface and engage with participants throughout the course of the project including the completion of exit questionnaires.**

PSYCHOMETRIC QUESTIONNAIRES

The recommendations are that whilst this study indicated number of positive outcomes, **the longer term impact requires a longitudinal study. An independent evaluation should be embedded within all large programmes.**

CENTRE ENGAGEMENT

Feedback indicated that the Centre team's military background and their insight and understanding into the lived experiences of the armed forces community was well received. **Future programmes should utilise the project evaluators to be actively engaged in the programme and have a role in supporting grant holders.**

COST EFECTIVENESS

The evaluation indicated that from a healthcare cost perspective that the programmes were **effective in incremental savings to society,** along with an increase in the beneficiaries QALYs. The recommendation is that large projects have a specific cost benefits analysis.

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RECCOMENDATIONS

PARTICIPANTS VOICE

Recommendations are that the participants feedback about the means for improving their support should be built into future programmes. **Satisfaction surveys should be included and bench marks set for certain criteria**

ASSESSMENT

Recommendations are that **predisposing factors and symptoms must be identified in the assessment process to ensure appropriate treatment and successful outcomes.** Also, a stressor on one member of the family impacts on all the family and reinforces the wider requirement for similar programmes engaging the whole family.

HELP SEEKING AND STIGMA

Help-seeking behaviour in veterans is poor, leading to excessive delays in addressing problems. It is recommended that **assessments of the client on entering a programmes and the evaluation should capture detail of the factors that negatively impact on help seeking behaviour.**

EMPLOYMENT & HOUSING

It is recommended that programmes **target specific areas of unemployment and living situations** – rented accommodation levels, living alone and homelessness and gain a better understanding of a veterans' life trajectory when leaving the Army and ways to prevent / address homelessness.

FAMILY MEMBERS

The issue of engagement with family members remains one that requires needs considerable focus. The recommendation is that **future programmes specifically targets the family including widows** (not war widows).

UNDER REPRESENTED GROUPS

Communities such as ethics minorities and reservists were also poorly recruited into this UK study. **Recommendation that specific programmes target minority groups such as ethnic minorities and reservists.**

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Appendix A - Delivery Partners

Grant Holder: Veterans First Point		
Code	Partner	Number of Coded Participants
1	Cyrenians	16
2	Coming Home Centre	4
3	Rock2 Recovery	2
4	Lothians Veterans Centre	6
5	Fares4Free	0
6	V1P	2
7	Horseback UK	3
8	Stand Easy	0
		Total:33
Inspire		
1	Trauma Related Psychotherapies	76
2	Addiction Support Services	6
3	Hub and Spoke Garden	12
4	Music Assisted Supportive Therapy	1
5	Equine-assisted supportive therapy and personal awareness program	23
6	Understanding Post traumatic stress disorder for families	15
7	Advocacy	6
8	Mindfulness	12
9	Telephone Based CBT	0
		Total:151
Ely Centre		
1	Brooke House	33
2	Ely Centre Bespoke Support Services	8
3	Victims & Survivors Service	3
		Total: 44
CAIS		
1	Change Step Peer mentors	84
2	Acceptance and Commitment Therapy (ACT) Training	0
3	Adferiad	0
4	Age Cymru Project 360	0
5	Beat the odds	0
6	BLESMA	0
7	CAIS Bespoke Services	0
8	G4S	0
9	Hafal	0
10	Help for Heroes	0
11	RBL	0

12	RBL The Poppy Factory	0
13	Rhyl Rugby Club	0
14	SSCE Cymru	0
15	TGP Cymru	0
16	UCLAN	0
17	The VC Gallery	0
18	Veterans UK	0
19	VNHSW	0
20	WCADA	0
21	Woody's Lodge	0
		Total:84
Grant Holder: Wigan		
1	Healthier Heroes	122
2	Wigan and Leigh Careers Centre	0
3	Addaction (now called We Are With You)	0
		Total:122
WWTW		
1	Calvert Trust	6
2	Warrior Programme	0
3	Click Therapies	2
4	Ripple Pond	0
5	Gateshead Carers	0
6	Go Gateshead	0
7	Veterans In Communities	0
8	Gaddum Centre	0
9	North East Counselling Service	1
10	Angling Trust	0
11	Recyke Y Bike	0
12	Moving Forces	0
13	Tom Harrison House	2
14	Blue Line Taxi	0
20	Unidentified Support Agency	62
		Total: 73
Solent NHS Trust		
1	Solent NHS Trust - Talking Change	14
2	Solent MIND - PositiveMinds	12
3	Solent MIND - Solent Recovery College	13
4	Society of St James - Substance Misuse	0
5	Solent MIND -QRF	0
		Total:39

Appendix B

Treatments and Intervention for MH disorders including PTSD, Depression and Anxiety-Related Disorders

Ser	Intervention	Detail		Reference
1	**Trauma Focussed CBT***	Treatment Interventions include trauma-sensitive intervention, cognitive behavioural therapy strategies and psycho-education.	Short term – usually 12 to 16 sessions.	*US IOM and UK NICE approved. Institute of Medicine (2008) NICE (2005)
2	**Eye Movement Desensitization & Reprocessing (EMDR) ****	Involves exposure and cognitive therapy, but with additional bilateral stimulation, usually in the form of eye movements	8 to 12 weekly 90-minute sessions Dropout rates up to 36%; Non-response rates between 7-92%	Friedman et al, 2003 **UK NICE approved
3	**Cognitive Prolonged Exposure (CPT)**	Emphasizes changing a patient's maladaptive cognitions related to his or her traumatic experience. Uses a writing narrative form of exposure.	12 sessions (60-90 minutes) w/practice of skills outside of sessions Dropout rates up to 29% Non-response rates 4-48%	Resick & Schnicke, 1993
4	**Prolonged Exposure Therapy (PE)**	Repeated exposure to feared, yet safe, stimuli and memories surrounding the trauma. Aims for a patient to experience a decrease in fear and an increase in mastery.	10 sessions (~90 minutes each) with homework assignments Dropout rates up to 50%; Non-response rates 20-67%; Exacerbation rates 13-28% Majority of trial data analysed by treatment completers (not ITT)	Foa et al, 2007 Bisson et al, 2007b Schnurr (2008)

5	**Stress Inoculation Training (SIT)**	Aims to help patients increase psychological resilience and manage their anxiety when confronting their traumatic memory or other trauma-related stimuli.		Meichenbaum (1996)
6	**Cognitive Processing Therapy (CPT)**	Group and Couples Psychotherapy.	US VA often utilizes a group approach for PTSD treatment in many of its inpatient and outpatient clinics. Empirical results are mixed.	Youngner et al (2013)
7	**Virtual Reality.**	Simulation and computer-assisted programmes	Unique method to administer prolonged exposure that adds sensory details to enhance the exposure experience. With added cues, patients may process and cope with their trauma, and thereby better respond to treatment.	Cukor et al (2009)
8	**Medication-Enhanced Psychotherapy (MEP).**	Involves some combination of a drug with psychotherapy	Evidence suggests this approach is SSRI-augmented prolonged exposure although mixed results to date.	
9	**Acceptance and Commitment Therapy (ACT).**	Empirically-based psychological intervention that uses acceptance and mindfulness strategies mixed in different ways with commitment and behaviour-change strategies		Hayes et al, 1999
10	**Skill Training in Effect and Interpersonal Regulation (STAIR).**	VA-supported evidence-based ancillary CBT (8 modules) for treatment of PTSD to learn skills in emotional regulation and interpersonal functioning.		Cloitre et al, 2002
11	**Telemedicine.**	Including behavioural activation.	Shown to be safe, acceptable, and effective for improving PTSD symptoms when administered individually as	Freuh et al. 2007

			prolonged exposure. May enhance completion of treatment.	Tuerk et al 2010
12	**Trauma Recovery and Empowerment Model (TREM)**	A group psychotherapeutic intervention focused specifically on women who have experienced trauma.	It helps clients restructure the way they think about the trauma and it emphasizes empowerment and skill-building to help clients cope with the daily and long term effects of trauma. Studies are hopeful but inconclusive as to the effectiveness of this intervention.	Fallot et al, 2014 Trauma Recovery and Empowerment Model
13	**Dialectical Behaviour Therapy (DBT)**	A form of CBT that helps examine and rationalize thoughts and feelings that are counterproductive to trauma recovery.	It gives clients the skills to replace negative thoughts and actions with productive and healing thoughts and behaviours. DBT focuses on cognitive and behavioural aspects of trauma. The therapeutic works are done by keeping a journal.	Landes et al, 2013
14	**Emotional Freedom Technique (EFT).**	Eight-phase therapy assumes that emotional disturbance, including PTSD, is the by-product of disturbances in the body's energy field (meridian system).	Involves light manual stimulation of endpoints of traditional acupuncture meridians on the face, upper body and hands, while the patient focuses on the traumatic event. Exposure is achieved by eliciting the imagery, narrative, and in vivo arousal related to the distressing memory. Two RCTs with one vs. EMDR showed similar results.	Craig 1999 Church et al, (2013) Karatzias et al 2011
15	**Neurofeedback (EEG biofeedback or Neurotherapy).**	Intensive brain training exercises (e.g. 10 weeks)	Focuses on excessive activation in the fear network part of the brain. That area is targeted for change through neurofeedback brain training.	Othmer & Othmer 2009
16	**Hypnosis**		The aim is to unlock stored emotion so that the trauma can be revisited and explored from a different perspective.	Speigal 1988, Speigal 1989
17	**Acupuncture**		Based on premise that the body is responsible for controlling particular brain areas that help control nervous functioning as well as mitigate stress levels.	Hollifield et al, 2007

18	**Yoga**		Aims to decrease affect dysregulation and increase tension reduction activities. Yoga Warriors International: http://www.yogawarriors.com/ Reduction in PTSD symptomology	Emersen et al, 2009; Cabral et al (2011) Cushing et al, 2018 Reinhardt et al, 2018
19	**Mindfulness**		RCT indicated that Mindfulness can reduce PTSD symptomatology in Vietnam Veterans	Polusny, 2015
20	**Traumatic Risk Management (TRiM)**			Jones, N., Roberts, P & Greenberg, N (2003)
21	**Outdoor Activities and Mental Wellbeing**	Utilising the biopsychosocial benefits of outdoor activities.	Activities include working with Service animals to provide a sense of security, calming effects, and physical exercise that can positively affect the quality of life. Equine-Assisted Psychotherapy. Incorporates horses experientially for emotional growth and learning. Defence Archaeological Group (DAG) Advocates refer to improve in self-worth, reduction in stigma and physical health	Nimenko & Simpson (2013)

Appendix C

Example of a Nvivo11 word frequency search and an example of the connectivity between meaningful extract – code – category and theme development.

Theme: Mental Health (MH)

Category: MH symptoms

Code: Family /Carer MH symptoms at entry

Condensed unit: *Tiredness, sleep disruption, negative thoughts, low mood, worrying, hopelessness, low self-esteem, social isolation and anger as mental health symptoms related to family stressors.*

Extracted unit: *"I am constantly tired and my sleep is often disrupted by negative thoughts and/or memories. I have a general low mood which can spiral out of control quite easily and I am permanently worried about a variety of things on a daily basis. I often feel hopeless and feel as I thought I cannot do anything right. My self-confidence is very low consistently and I isolate myself to deal with stressful situations whether that be physically or mentally. I feel constant simmering anger towards the veteran because of past events."*

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For details of these projects, awards, conferences, and community engagement, please visit the Centre website: https://www.chester.ac.uk/health/crivw

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Lottie joined the Centre in January 2019. She is a military spouse of a currently serving Officer and has previously worked for military charities. She is working on various evaluations with the Armed Forces Covenant Fund Trust and the NHS. In this evaluation, Lottie was the Project Administrator providing Grant holder support and was responsible for constructing the online questionnaires,

Natasha Green PhD

Natasha Green joined the Centre in March 2021. She was awarded her PhD from Queen's University Belfast and has research experience in qualitative and quantitative methodologies. Natasha is connected to the Armed Forces Community, with both of her parents previously serving in the British Army. Natasha contributed to the analysis and writing of the report.

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Lauren works at the Centre as an Administration Assistant and PA to Professor Finnegan. Lauren assists in a number of military forums including being Secretary for the Cheshire Armed Forces Covenant Partnership Committee and oversees administration of all veteran related projects within the centre. In this project, Lauren contributed to the questionnaire design and administrative support.

Tom Burke

Tom works at the Centre as a Health Economics Researcher. He has worked in the field of health economics for over 10 years, and has overseen the design and analysis of several multinational studies alongside charity organisations and the University of Chester. Tom contributed to the design and analysis of the data collected during the conduct of this study, culminating in a health economic model built to inform cost-effectiveness outcomes.

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Lisa is a Visiting Research Fellow at the Centre, with experience in quantitative and qualitative methods, in particular experimental psychology. Lisa was the initial lead researcher for the study at the University of Chester before take up an appointment as a Lecturer in psychology at Liverpool Hope University. Lisa contributed to the analysis and writing of this report.