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'One Is Too Many' preventing self-harm and suicide in military veterans: a quantitative evaluation

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ABSTRACT

Introduction In 2021, the Armed Forces Covenant Fund Trust allocated over £2 million to programmes designed to have a clear and demonstrable impact on suicide prevention. Four grant holders delivered a combination of psychotherapeutic interventions, group activities, social prescribing, peer support mentoring, life skills coaching, educational courses and practical help with housing and employment. The evaluation was completed between August 2021 and July 2023.

Methods A survey was completed by 503 participants at entry and 423 at exit. It captured data regarding demographic and military-specific details, health status, situational stressors, predisposing symptoms, help-seeking behaviour, social engagement, housing, living arrangements and employment status. The questionnaire included a number of validated psychometric questionnaires.

Results This evaluation revealed reductions in situational stressors, symptoms and mental health illnesses. Seventy-six per cent of participants had completed an Operational Tour, and 77% were exposed to a traumatic event during service. It was the negative impact of unresolved traumatic effects that influenced service-users to require support. Forty-nine per cent delayed seeking help, and 36% self-referred to the One Is Too Many programme which demonstrates the importance of this option. There were improvements in the participants' social networking, social activities, club membership and having people to rely on. Only 4% of participants were women which reinforces the requirement to explore initiatives to engage with female veterans.

Conclusions Timely therapeutic and social prescribing interventions in a safe environment lowered depression, anxiety and the associated situational stressors leading to self-harming and may have reduced suicide. It presented another option to veterans and their families regarding where they can obtain support, care and therapeutic interventions. The programme provided a strong foundation for delivery organisations to forge lasting collaborative partnerships that can be extended to working with other authorities and institutes. The results highlight pathways for prevention and intervention strategies to inform policymakers, healthcare professionals and third-sector organisations.

INTRODUCTION

Suicide is a devastating event, inflicting damaging consequences on families, friends and colleagues. Within a military context, there is often a perception that military veterans' suicides directly correlate with the impact of serving in hostile environments. However, the factors leading to someone taking their own life are often extremely complicated and

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Suicide is a devastating event, inflicting damaging consequences on families, friends and colleagues.

WHAT THE STUDY ADDS

⇒ Evidence that unresolved traumatic effects related to Operational Tours caused service-users to require support.
⇒ A personalised care plan with tailored intervention options led to improvements in participants' social networking, social activities, club membership and having people to rely on.

HOW THE STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The programme provides a strong foundation for delivery organisations to forge lasting collaborative partnerships that can be extended to working with other authorities and institutes.
⇒ The findings illustrated protective factors which facilitate the development and implementation of prevention and intervention strategies and policy.

influenced by numerous situational factors and personal beliefs.¹

In 2021, the Armed Forces Covenant Fund Trust (the Trust) allocated >£2 million for 2-year 'One Is Too Many' (OITM) projects designed to have a clear and demonstrable impact on suicide prevention by providing the following: a better understanding of the issues; timely intervention; peer support while addressing the barriers to accessing healthcare. The grant holders for this evaluation were the Royal Marines Charity (RMA), the Forces Employment Charity, Inspire and Adferiad. They offered interventions that included mental health (MH) assessments, psychotherapeutic options such as cognitive-behavioural therapy (CBT), counselling and medication. There were group activities, social prescribing events such as equine therapy, peer support mentoring, life skills coaching, educational courses and practical help with housing and employment (see [table 1](#)). Clients were not enrolled on concurrent interventions or treatment.

In 2021, the programme was launched with an engagement event including workshops to help prepare grant holders for the challenges that lay ahead including ethical considerations (see [figure 1](#)). The UK National Institute for Health and Care Services state that consideration should be given to measuring activities designed to prevent



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Table 1 Grants holders involved in the evaluation

Organisation	Project title	Project description	Host websites All 30 December 2023
Adferiad Recovery (Wales)	Left of Boom—Suicide Reduction	A project to prevent suicide through the provision of a bespoke peer mentoring service across Wales. The project providing timely interventions with a focus on enlisting participants with poor help-seeking behaviour.	https://adferiad.org
Inspire (Northern Ireland)	Every Life Matters	Offering a proactive, targeted and integrated approach to identify, address and reduce suicidality and concomitant risk factors. Combining prevention and intervention using a case-managed, stepped-care delivery model tailored to older Northern Ireland veterans. Also offered an aftercare service.	https://www.inspirewellbeing.org
The Forces Employment Charity—RFEA	Project Nova—One is Too Many	Engagement with veterans who were in contact with the Police. This included the provision of a toolkit for veterans who are feeling suicidal.	https://www.forcesemployment.org.uk
Royal Marines Charity—RMA	Lifting the Lid—Suicide Prevention Pathways	Accessible community-based support pathways and stigma reduction through 'prevent and recovery' practice. Tailored to the Royal Marines to promote help-seeking. Employment advice, financial and benevolent support, MH and substance misuse interventions. Training and peer support while option to signposting to other services.	https://rma-trmc.org

suicide,² and this evaluation commenced in August 2021 and concluded in July 2023.

There are approximately 1.85 million British Armed Forces veterans in England and Wales.³ Veterans can receive support from a general practitioner or access NHS priority treatment for MH conditions attributable to their military service. Under this banner, NHS England's Op COURAGE: The Veterans Mental Health and Wellbeing Service provides specialised MH support including partnerships with community/voluntary third-sector services.⁴

Office for National Statistics⁵ reported that in 2021, there were 5583 suicides registered in England and Wales, equivalent to a rate of 10.7 deaths per 100 000 people. Of these, 74% (n=4129) were men which is the equivalent to 16.0 deaths per

100 000 and for women there were 5.5 deaths per 100 000. Among females, the age-specific suicide rate was highest in those aged 45–49 years (7.8 deaths per 100,000), and among males highest in those aged 50–54 years (22.7 deaths per 100 000). Suicides were lowest among people aged under 20 and over 70. Overall rates in Northern Ireland were 14.3 deaths per 100 000.⁶

The social contexts and causes of self-harming behaviour are complex, although usually associated with a number of situational stressors.^{7,8} However, research comparing the prevalence of suicide and suicidal ideation in the veteran community with the civilian population has identified no significant differences.^{9–12}

Factors associated with the risk of suicide in veterans include the following: being a young male (under 28 years); discharging as an Early Service Leaver (ESL) (within 4 years of



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Figure 1 One Is Too Many grant holders.

enlistment)^{12 13}; females over 40 years; having depression or alcohol problems^{10 12 13}; combat experience¹⁴; those who sustain injuries,¹⁵ unemployed¹⁶ and reservists.¹⁵ Veterans who experienced adverse life events before enlisting, or had difficulties adjusting to civilian life, may be at higher risk.¹⁶ Post-traumatic stress disorder (PTSD) increased the risk of suicide in veterans compared with the civilian population and was found to be significantly related to suicidal thoughts, plans and previous attempts.¹⁰ Female veterans were found to be at higher risk of suicide than female civilians, although there was no statistical difference between male veterans and female veterans.⁹ Veterans who delayed seeking help for MH difficulties reported more suicidal ideation which supports the stance that veterans often fail to seek help until they are in crisis.^{13 17}

Aims and objectives

Aim

To evaluate the effectiveness of the OITM programmes and make recommendations for development.

Objectives

1. Identify trends and risk factors (including gender and age) and indicate if vulnerable groups were prone to significant MH issues (eg, whether aspects of their life or military service contributed to self-harming or potential suicide).
2. Provide insights into areas such as employment, accommodation, social isolation and help-seeking behaviour and provide indicators of the situational factors causing distress and potential self-harming/suicide.
3. Gauge participants' views regarding their satisfaction with the OITM programmes and the impact on their quality of life.

METHOD

A survey including tick boxes and Likert scale questions was completed at programme entry and exit. This replicated the survey designed for a previous Trust project.¹⁸ The survey captured data regarding demographic and military-specific details, health status, situational stressors, predisposing symptoms, help-seeking behaviour, social engagement, housing, living arrangement and employment status. The exit survey offered grant holders the option to record their satisfaction. Psychometric questionnaire scores were included if they were used as part of the grant holder's assessment process and included the Patient Health Questionnaire-9 (PHQ-9), and Generalised Anxiety Disorder-7 (GAD-7). The entry survey took approximately 15 min to complete and the exit survey took 12 min to complete. The evaluation was completed between August 2021 and July 2023.

Data analysis

Completed questionnaires were downloaded and exported from the Jisc online survey portal and inputted into the IBM SPSS Statistics software database V.27. Quantitative data analysis included descriptive statistics of frequency distributions, and paired-sample t-tests facilitated comparisons between the completed questionnaires at programme entry and exit. Appropriate bivariate correlations supported the exploration of relationships between variables to identify multifactorial causes of poor MH outcomes in veterans entering the programme. The following values were used to interpret and determine the strength of the correlations. The latter comprised negligible correlation: 0.00–0.10, weak correlation: 0.10–0.39, moderate

correlation: 0.40–0.69, strong correlation: 0.70–0.89 and very strong correlation: 0.90–1.00. For all analyses, a p value of <0.05 was considered statistically significant.¹⁹

RESULTS

There were 597 participants who received an entry questionnaire of which 84% (n=503) were completed and 71% (n=423) for exit questionnaires. Participants engaged in an average of two interventions, incorporating MH therapy or counselling 71% (n=181) with CBT including eye movement desensitisation and reprocessing. Group activities 35% (n=89), MH assessments 23% (n=58), MH medication 8% (n=20) and other activities 13% (n=34), such as help with housing and employment, educational courses, family mediation or participation in equine or art therapy.

Demographics, service history and Operational Tour (OT) profile

Participants were 96% (n=483) male and 4% (n=20) female, with a mean age of 45 years. Sexual orientation was 99% (n=465) heterosexual, with 1% (n=7) from the Lesbian Gay Bisexual Transgender Queer (LGBTQ) community. Further demographic details on status ethnicity and religion are in [table 2](#).

Participants were predominately from the Army 53% (n=267), in regular service 97% (n=486) and a private soldier or equivalent when they left the Armed Forces (55%, n=262). The mean length of service was 12 years (n=66, median=10; mode=6; SD=7.52; range 1–32 years); 3% (n=2) were ESLs, leaving inside 1 year and 12% (n=8) served for less than 4 years. The majority 76% (n=362) conducted OTs (see [table 2](#)). A significant relationship was observed between whether a veteran had conducted OTs and service-linked trauma ($\chi^2(2, n=465) = 108.89, p < 0.05$), and although relationships were observed between the number of OTs and service-linked trauma, this was not significant ($\chi^2(10, n=305) = 8.963, p = 0.536$).

Veteran trauma related to military service

Seventy-seven per cent (n=367) of veterans reported exposure to a traumatic event during their service, with a mean of two events (median=2; mode=2; SD=1.75; range 1–5 traumas). Traumatic events (which were not mutually exclusive) were reported as conflict/contact situations 58% (n=289), followed by personal attack 29% (n=146), abuse 23% (n=116) and accidents 23% (n=113). The mean rating of the most traumatic event reported was graded at 9, ranging from 0 (minimum distress) to 10 (maximum distress). There was a significant correlation between number of years served and number of traumatic events experienced ($r(402)=0.295, p \leq 0.05$), indicating the longer the service, the greater number of traumatic events experienced. A significant correlation was observed between the number of traumatic events experienced during service and depression scores on entry ($r(450)=0.237, p \leq 0.05$), and a correlation was also observed between traumatic events experienced and anxiety ($r(450)=.170, p=0.097$), but this was not statically significant.

Discharge, physical and mental health

The most common reasons for leaving the Armed Forces were the end of the contract (32%, n=152), premature voluntary release 25% (n=119) and medical discharge 25% (n=116). On entry, 83% (n=393) self-reported long-standing physical or MH problems and they were affected by an average of two illnesses (median 3; mode 4; SD 1.61; range 1–7). The most common being depression (55%, n=275), anxiety (53%, n=267), PTSD

Table 2 Demographic and service history

Serial	Variable	Sample size (N)	Results
1	Age	503	Mean 45 Range 18–85
2	Gender	503	Male 96% (n=483) Female 4% (n=20)
	Status	471	Single 38% (n=181) Married 32% (n=150) Divorced 10% (n=46) Civil partnership 8% (n=40) Widower 1% (n=7)
3	Ethnicity and religion	503/318	White British 97% (n=484) Atheist 70% (n=224) Christian 25% (n=81) Muslim 1% (n=2) Other 3% (n=11)
4	Service history	503	British Army 53% (n=267) Royal Navy 4% (n=19) Royal Air Force 4% (n=21) Royal Marines 38% (n=192) Regular 97% (n=486) Reservist 2% (n=12)
5	Rank	478	Private 55% (262) Junior Non Commissioned Officer 25% (121) Senior Non Commissioned Officer 17% (80) Officers 2% ¹¹ Other 1% ⁴
6	Operational Tours (OTs)	479	Yes 76% (n=362) No 24% (n=117) Mean 2; medium; 2 mode 1; range 1–11; SD 1.76 OT not mutually exclusive Afghanistan 37% (n=176) Northern Ireland 37% (n=175) Iraq 26% (n=121) Balkans 11% (n=50) Sierra Leone 4% (n=19) Falklands 4% (n=18) Other 9% (n=43)

(51%, n=257) and musculoskeletal/back problems (25%, n=126). Following exit, there were decreases in self-reported depression 35% (n=147), anxiety 37% (n=156), PTSD 40% (n=170) and musculoskeletal problems 15% (n=66). Although changes were observed at exit, with veterans self-reporting fewer illnesses, a paired samples t-test indicated this was not significant ($t(269) = 1.67$, $p=0.096$).

Predisposing factors and symptom

A mean of five predisposing factors was reported by veterans on entry (median=4; mode=4; SD=3.00; range 1–16). The most

common were as follows: unresolved trauma 66% (n=334), traumatic exposure 53% (n=268) and family problems 47% (n=235). Exit details showed notable reductions in all areas with an increase in only dementia. On admission, participants reported a mean of nine symptoms (median=9; mode=11; SD=4.49; range 1–17). These were anxiety 79% (n=396), low mood 78% (n=394) and included feelings of hopelessness 67% (n=334). At exit, there were decreases in every criterion, with self-reported factors reducing from five to two and symptoms from nine to three. Self-reported illnesses remained the same (n=2) (see figure 2).

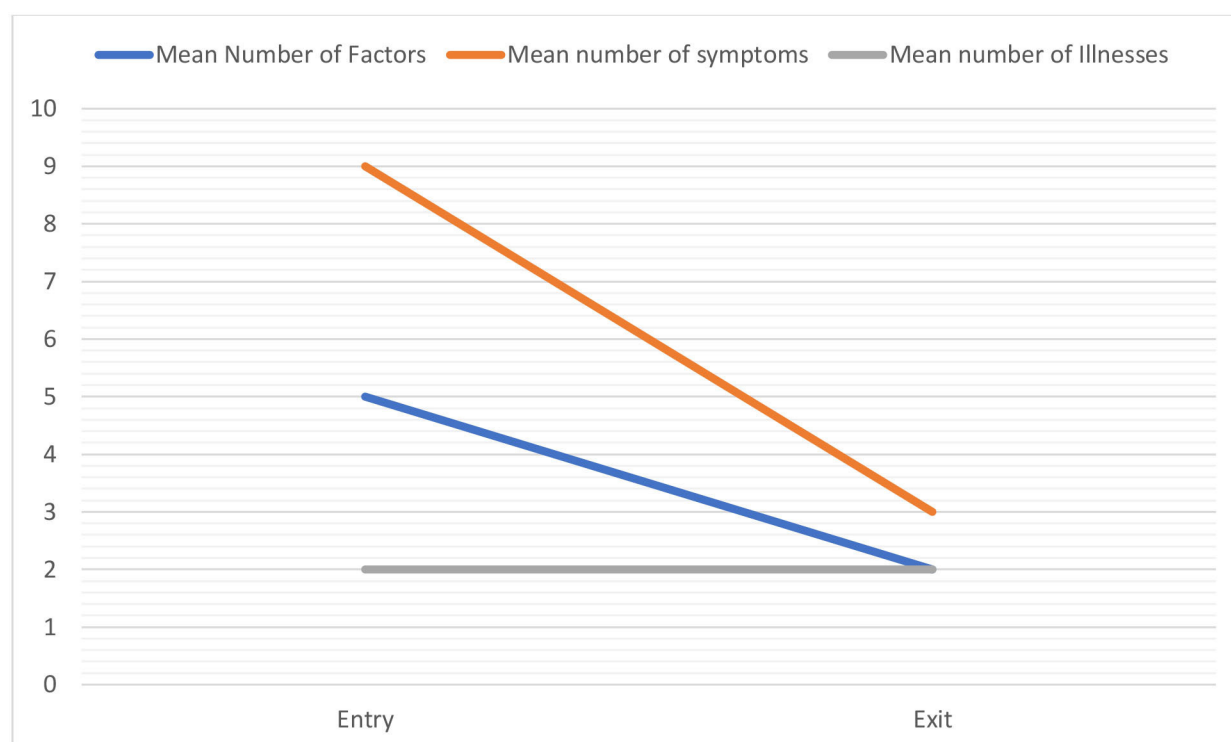
**Figure 2** Illnesses, predisposing factors and symptoms at entry and exit.

Table 4 Veterans' housing and accommodation—main reported status

Grant holder		Housing			Accommodation		
		Homeowner	Renting	Other	Living alone	Living with spouse/ partner	Living with family
Total	Entry	204 (45%)	171 (37%)	82 (18%)	168 (36%)	201 (43%)	63 (13%)
	Exit	177 (45%)	152 (39%)	18 (5%)	129 (33%)	182 (46%)	41 (10%)

On entry, correlations were observed between the number of traumatic events experienced during service and the number of reported illnesses ($r(450)=0.121$, $p>0.05$). Also, the number of reported predisposing factors ($r(450)=0.395$, $p<0.05$) and number of reported symptoms ($r(450)=0.439$, $p<0.05$), both of which were significant and indicates a relationship between exposure to trauma and the number of factors and symptoms.

Support services

Fifty-one per cent ($n=239$) reported having previously accessed support with the majority contacting a mean of two organisations, most commonly from the NHS 51% ($n=121$) and charities 43% ($n=103$). Forty-nine per cent ($n=232$) stated that they delayed help-seeking, with a mean of two factors, most commonly 'finding it hard to ask for help' at 30% ($n=69$) and 'being unaware of the available support' at 18% ($n=41$). The most common programme entry was by self-referral (36%, $n=179$) then charities (16%, $n=80$).

Social networks

Twenty-four per cent ($n=112$) reported having 'no one' to rely on. Regarding social interactions, most met people 'once or twice a month' (31%, $n=118$) and 'once or twice a week' (28%, $n=107$). Seventy-eight per cent ($n=310$) were not active members of clubs. On exit, this decreased to 64% ($n=189$). Regarding engagement in social activities, on entry, participants 54% ($n=236$) were 'much less than most' which at exit reduced to 17% ($n=49$). Following the projects, improvements in social networks were significant for 'taking part in social activities' ($\chi^2(20, n=265) = 34.58$, $p<0.05$), 'active members of clubs' ($\chi^2(2, n=269) = 10.83$, $p<0.05$) and 'relying on people' ($\chi^2(4, n=364) = 29.37$, $p<0.05$).

Employment and housing

Employed service-users were 44% ($n=221$) with 39% ($n=196$) unemployed. On exit, employment increased to 48% ($n=188$) with unemployment falling to 32% ($n=124$). Significant employment differences were found between grant holders ($\chi^2(15) = 32.72$, $p<0.05$). Homeowners were 45% ($n=204$), those living in rented accommodation were 37% ($n=171$) and 3% ($n=16$) were homeless. On exit, 45% ($n=177$) were homeowners, 39% ($n=152$) were living in rented accommodation, and 3% ($n=12$) were homeless. There were 43% ($n=201$) of participants living with their spouse/partner, followed by 36% ($n=168$) living alone. On exit, 46% ($n=182$) were living with their spouse/partner and 33% ($n=129$) were living alone. The main status is in tables 3 and 4.

Table 3 Veterans' employment—main reported status

Grant holder		Employment		
		Employed	Unemployed	Retired
Total	Entry	221 (44%)	196 (39%)	56 (11%)
	Exit	188 (48%)	124 (32%)	48 (12%)

A one-way Analysis of Variance (ANOVA) showed a significant difference between age and housing status ($F(3, 439)=13.87$, $p>0.05$). Post-hoc comparison tests using the Tukey HSD test indicated significant differences across age groups (18–30, 31–50, 51–70) and housing status although there was no significant difference between age groups and the older age group (71–85). This indicates that although differences in housing were apparent across age groups, the older veterans were more stable in terms of housing status.

Psychometric questionnaires and satisfaction

On programme entry, PHQ-9 and GAD-7 scores revealed a sample with moderate to moderately severe depression and severe anxiety. On exit, paired sample t-tests indicated significant differences across improvements for the PHQ-9 ($t(16) = 6.38$, $p<0.01$) and GAD-7 ($t(18) = 5.55$, $p<0.05$), meaning significant reductions in depression and anxiety were present. Participant satisfaction was 94% ($n=364$) and positive impact on quality of life was rated with a mean score of 9 (ranging from 0 no impact to 10 maximum impact).

DISCUSSION

The grant holder's dedication, intelligent application of resources and timely therapeutic and social prescribing interventions alongside participant engagement within a safe setting resulted in widespread accomplishments with reductions in depression and anxiety, improved health and well-being and better social interactions. Flexibility and responsiveness to referrals, empathetic peer support with collaborative networking and connectivity helped reduce the situational stressors leading to self-harming and may have reduced suicide.

Participants' mean age was 45 years old. For men, lower than the civilian equivalent of suicide rates at 50–54 years but for women comparable to the civilian population most at risk.⁵ This indicates that the grant holders were reaching their target vulnerable age group. Service-users were younger than the overall median age of UK veterans, where almost one-third are 80 years old or over.³ While suicide rates begin to drop in those aged over 70 years old, it does however rise again from 85 onwards in a vulnerable group due to factors including failing health and bereavement of loved ones.⁵

Only 4% ($n=20$) of participants were women which is below the 11.2% of women serving in the British Armed Forces.²⁰ This may indicate that men experienced severe MH issues and women did not, or that women did not want to access the service, or they may have been unaware of the programme. Female veterans were less likely to deploy in front-line combat areas, and many take on professional roles such as doctors and nurses, so they may be a less vulnerable group. Without data, it is impossible to state exactly why women were under-represented as they do commit suicide. The evaluation reinforces the requirement to further explore initiatives to engage with female veterans and to examine the impact of gender-related experiences during military service on female veterans' help-seeking behaviour. In

addition, ethnic minorities represent 9.6% of the British Armed Forces²⁰ but only 1% in this programme.

Service history

Ninety-seven per cent completed regular service, indicating that reservists were not attracted into the programmes. However, as risk factors are situational stressors, age-related or aligned to MH issues such as depression or alcohol misuse, then more reservists were anticipated. Considering reservists were used extensively during operations in Afghanistan (2002–2014) and Iraq (2003–2011), why they have not been engaged needs further exploration. Seventy-six per cent completed an OT, and 77% were exposed to a traumatic event during service. These incidents increase the likelihood of MH issues such as PTSD. Correlations confirmed a relationship between service-linked trauma and those who had completed an OT. Also, significant correlations were observed between the number of traumatic events experienced during service and the number of reported situational factors and the number of reported symptoms on entry, which is an indication that it is the negative impact of unresolved traumatic effects that cause service-users to require support.

Health

At entry, 83% reported long-standing physical or MH illness, with over 50% reporting depression, anxiety and PTSD. These figures are likely to be higher due to individual attestation but considerably higher than UK veterans generally.²¹ All MH morbidity had notably decreased at exit. The psychometric PHQ-9 and GAD-7 scores at entry indicated veterans were exhibiting severe anxiety and moderately severe depression and reflected the self-reported health findings. These questionnaires reaffirmed improvements against all measures at exit from the programme. The findings reflect the outcomes from a National Health Service England Op COURAGE High Intensity Service evaluation which concluded that early peer support followed by social prescribing and clinical interventions can have positive outcomes.²²

Stressful life events such as financial problems, unemployment and relationship instability are considered to be high-risk factors contributing to suicide.²³ Veterans presented with an average of five predisposing factors ranging from 1 to 15 including unresolved trauma (66%), traumatic exposure (53%) and family stress (47%). Exit details showed notable reductions in all areas with situational stressors reducing from five to two which resulted in significant improvements to the participants'

well-being and is a clear indication of the programme's success. The results indicated that reducing/resolving even one situational stressor in a timely and effective manner can have a meaningful bearing on the individual and re-energise and motivate them to address other issues. Therefore, projects that concentrate on issues such as accommodation and employment can have much wider benefits.

Service users had a mean of nine symptoms with a range of 1–17. Most common were anxiety (79%), low mood (78%) with feelings of hopelessness (67%) and lack of interest (63%), symptoms concurrently linked to depression.²⁴ At exit, there was a significant reduction in symptoms from nine to three representing tangible advantages for the beneficiaries. Service-users presenting with a lack of interest and feelings of hopelessness would have presented the grant holders with challenges in getting clients motivated to be involved in any activity. That they did may be due to the focus on veteran-specific services and peer support workers who provided this vulnerable group with a sense of identification with those offering the support.

Help-seeking behaviour and social isolation

Fifty-one per cent of participants had previously sought support, most commonly via NHS facilities and charities. It was not clear how many of these engagements were related to a self-harm attempt or feeling suicidal, but does reveal that some of them did not receive the support they required, or were discharged only for their problems to resurface. That 36% self-referred to the OITM programme clearly demonstrates how important this option is. Forty-nine per cent delayed seeking help, and improving knowledge and access to Primary Healthcare and veteran-specific services together with investment in destigmatising MH are further required.^{25 26} There was a significant improvement in the participants' social networking, social activities, club membership and having people to rely on. The participants of varying ages seemed motivated to connect with a variety of social engagement opportunities as many of the activities had a physical exertion component which potentially would have enhanced their mood. Identification with a particular charity such as the RMA appears to be a particularly useful way of tackling this conundrum. How this progresses over time was not identified, but the hope would be for long-term engagement, motivation and benefits.

Employment and housing

Veterans may face challenges with employment²⁷ and housing.²⁸ On entry, 39% of participants were unemployed, 11% were

Table 5 Recommendations

Ser	Heading	Issue	Recommendation
1	Grant holder engagement	An engagement event that addresses ethical issues helps grant holders prepare for the future challenges.	Initial events ethical training for non-clinical staff.
2	Caring for the carer	Supporting vulnerable clients can have a negative impact on the MH of those delivering the care.	Provide training for those delivering support. Research the impact on MH
3	Help-seeking and stigma	Veterans' help-seeking behaviour is poor leading to delays in addressing MH and social problems.	Identify the factors that negatively impact on help-seeking behaviour and promote self-referral.
4	Minority samples	Women, ethnic minorities, reservists, the elderly and the Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) communities.	A strategy for reaching minority groups with specific programmes for these groups.
5	Assessment	Identify the client's situational factors. Resolving even one causative factor can have a significantly positive bearing.	Record the clients' situational stressors during the assessment process.
6	Interventions	A mixture of intervention options and peer mentoring address poor help-seeking behaviour.	Offer personalised care plans including social prescribing activities.
7	Employment and accommodation	Unemployment/poorly paid employment and poor accommodation cause significant distress.	Requirement to enhance employment and housing and identify the life trajectory after leaving the Armed Forces.
MH, mental health.			

retired and 44% were employed. Although the age range is different, the Ministry of Defence estimates that 79% of working-age veterans were employed and 3% were unemployed.²⁹ So there is a marked difference, and stable well-paid employment is extremely important to MH and well-being. Following exit, unemployment rates fell by 7% and there was a 4% increase in employment. That 32% of veterans were still unemployed provides an identifiable area for improvement.

The 2021 Census³⁰ revealed that 75% of veterans owned their accommodation outright or held a mortgage. With OITM participants, homeowners were significantly lower at 45%, with a further 37% in rented accommodation, and 3% homeless. This reaffirms that employment and housing status are contributing significantly to the service-users distress. Targeting these issues while gaining a better understanding of the life trajectory after leaving the Armed Forces is required, including those who are homeless or required to access judicial services.

At 94%, the majority of participants were satisfied across all programmes, rating the interventions at 9 out of 10 in relation to the positive impact on their quality of life. The study recommendations are given in table 5.

Limitations

The results do not indicate sustained improvements, and a longitudinal study, qualitative interviews and cost-benefit analysis are required to determine sustainable long-term benefits. There were low numbers of females, ethnic minorities, LGBTQ and elderly veterans >70 years old. There is no comparison between the different programmes.

Conclusions

OITM provides a strong foundation for delivery organisations to forge lasting collaborative partnerships that can be extended to working with other authorities and institutes, governmental agencies, charities, businesses and appropriate networks. Most importantly, it presented another option to veterans and their families who need help. However, there are significant emotional challenges for the staff providing care to vulnerable veterans, and this raises concerns regarding the impact on their mental health. The findings illustrated suicide risk and protective factors which facilitate the development and implementation of preventative and intervention strategies to inform policymakers, healthcare professionals and third-sector organisations of a direction of travel that has palpable benefits.

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Competing interests None declared.

Patient consent for publication Not applicable.

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Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request.

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REFERENCES

- 1 Randles R, Burroughs H, Green N, *et al*. Prevalence and risk factors of suicide and suicidal ideation in veterans who served in the British armed forces: a systematic review. *BMJ Mil Health* 2023:e002413.
- 2 National Institute for Clinical Excellence. Suicide prevention. QS 189. 2019. Available: <https://www.nice.org.uk/guidance/qs189>
- 3 Office for National Statistics in England and Wales. UK armed forces veterans, England and Wales: census 2021. 2022. Available: <https://www.ons.gov.uk/peoplepopulationandcommunity/armedforcescommunity/bulletins/ukarmedforcesveteransenglandandwales/census2021>
- 4 National Health Service England (NHSE). Mental health support for veterans, service leavers and reservists. 2023. Available: <https://www.nhs.uk/nhs-services/armed-forces-community/mental-health/veterans-reservists/#:~:text=The%20Veterans%20and%20Reserves%20Mental,DMS%20to%20provide%20appropriate%20treatment>
- 5 Office for National Statistics. Suicides in England and Wales: 2021 registrations. 2022. Available: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/suicidesintheunitedkingdom/2021registrations>
- 6 Northern Ireland Statistics and Research Agency. Finalised suicide statistics in Northern Ireland 2015-2021. 2023. Available: <https://www.nisra.gov.uk/system/files/statistics/Suicide%20Review%20Report%20Nov%2022.pdf>
- 7 Finnegan A, Finnegan S, Thomas M, *et al*. The presentation of depression in the British army. *Nurse Education Today* 2014;34:83-91.
- 8 Schnyder U, Valach L, Bichsel K, *et al*. Attempted suicide. do we understand the patients reasons? *Gen Hosp Psychiatry* 1999;21:62-9.
- 9 Bergman BP, Mackay DF, Smith DJ, *et al*. Suicide in Scottish military veterans: a 30-year retrospective cohort study. *Occup Med* 2017;67:350-5.
- 10 Bergman BP, Mackay DF, Pell JP. Suicide among Scottish military veterans: follow-up and trends. *Occup Environ Med* 2022;79:88-93.
- 11 Kapur N, While D, Blatchley N, *et al*. Suicide after leaving the UK armed forces—A cohort study. *PLoS Med* 2009;6:e1000026.
- 12 Rodway C, Ibrahim S, Westhead J, *et al*. Suicide after leaving the UK armed forces 1996-2018: a cohort study. *Epidemiology* [Preprint] 2022.
- 13 Harden L, Murphy D. Risk factors of suicidal ideation in a population of UK military veterans seeking support for mental health difficulties. *J R Army Med Corps* 2018;164:352-6.
- 14 Fear NT, Jones M, Murphy D, *et al*. What are the consequences of deployment to Iraq and Afghanistan on the mental health of the UK armed forces? A cohort study. *Lancet* 2010;375:1783-97.
- 15 Harvey SB, Hatch SL, Jones M, *et al*. The long-term consequences of military deployment: A 5-year cohort study of United Kingdom reservists deployed to Iraq in 2003. *Am J Epidemiol* 2012;176:1177-84.
- 16 Rozanov V, Carli V. Suicide among war veterans. *Int J Environ Res Public Health* 2012;9:2504-19.
- 17 Randles R, Finnegan A. Veteran help-seeking behaviour for mental health issues: a systematic review. *BMJ Mil Health* 2022;168:99-104.
- 18 Finnegan A, Di Lemma L, Mcghee S, *et al*. Evaluating serious stress in military veterans, their carers and families: a protocol. *BMJ Mil Health* 2023;169:263-8.
- 19 Schober P, Boer C, Schwarte LA. Correlation coefficients: appropriate use and interpretation. *Anesth Analg* 2018;126:1763-8.
- 20 UK armed forces biannual diversity statistics: 1 April 2022, Available: <https://www.gov.uk/government/statistics/uk-armed-forces-biannual-diversity-statistics-april-2022/uk-armed-forces-biannual-diversity-statistics-1-april-2022#:~:text=At%201%20April%202022%2C%20ethnic,in%20the%20UK%20Regular%20Forces>
- 21 Finnegan A, Randles R. Prevalence of common mental health disorders in military veterans: using primary Healthcare data. *BMJ Mil Health* 2023;169:523-8.
- 22 Finnegan A, Salem K, Green N, *et al*. Evaluation of the NHS England 'op COURAGE' high intensity service for military veterans with significant mental health problems. *BMJ Mil Health* 2023:e002385.
- 23 Royal College of Psychiatrists. Self harm and suicide in adults. (CR 229). 2020. Available: <https://www.rcpsych.ac.uk/improving-care/campaigning-for-better-mental-health-policy/college-reports/2020-college-reports/cr229>
- 24 National Institute of Clinical Excellence (NICE). Overview | Depression in adults: recognition and management | Guidance 2015, Available: <https://www.nice.org.uk/guidance/cg90>

- 25 Finnegan A, Randles R. Where are all the veterans? A mixed methods assessment of a systematic strategy to increase veteran registration in UK primary Healthcare practices BMJ open. *BMJ Open* 2023;13:e068904.
- 26 Finnegan A, Salem K, Ainsworth-Moore L, *et al*. The veteran friendly practice accreditation programme: a mixed methods evaluation. *BJGP Open* 2022;6:BJGPO.2022.0012.
- 27 Fulton E, Wild D, Hancock J, *et al*. Transition from service to civvy street: the needs of armed forces veterans and their families in the UK. *Perspect Public Health* 2019;139:49–58.
- 28 Fleuty K, Cooper A, Almond MK. Armed Forces and veteran housing policies: the United Kingdom 2021 vision. *JVS* 2021;7:232.
- 29 House of Commons Library. Support for UK veterans: research briefing. 2023. Available: <https://researchbriefings.files.parliament.uk/documents/CBP-7693/CBP-7693.pdf>
- 30 Office for National Statistics. Living arrangements of UK armed forces veterans, England and Wales: census 2021. 2021. Available: <https://www.ons.gov.uk/peoplepopulationandcommunity/armedforcescommunity/articles/livingarrangementsofukarmedforcesveteransenglandandwales/census2021>