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Exploring the Feasibility of Supporting UK Partners Living Alongside Veterans with PTSD: A Pilot Study of the Together Programme (TTP)

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Abstract

Background: Romantic partners living alongside veterans with Post Traumatic Stress Disorder (PTSD) appear at increased risk of secondary traumatic stress (sPTSD) and common mental health difficulties (CMD) compared to the general population. The severity of symptoms implies the need for structured, bespoke and evidence-based interventions.

Objective: The aim of this study was to explore the feasibility of offering a community support programme (The Together Programme, TTP) for military partners. TTP was developed based upon a number of US programmes and consisted of 10 hours of group-based support delivered over a five-week course. 56 participants engaged in TTP over a year at nine locations across the UK and were followed up three months later.

Methods: Measures of CMD, sPTSD, alcohol use and relationship satisfaction were used to assess benefits. Data were also collected on attendance and participant feedback.

Results: Significant reductions were observed for symptoms of sPTSD and CMD at follow up. 51/56 (90.1%) participants completed TTP. The majority of participants reported positive experiences. However, several individuals stated wanting more sessions and that barriers such as work, and family commitments made it difficult to attend.

Conclusions: Whilst limitations exist, the data presented suggests cautious optimism for the efficacy of offering a structured programme of support to address the needs of military partners living alongside PTSD.

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Introduction

The impact of military conflict on mental health is well established, for instance several studies have demonstrated the higher prevalence rates of mental health difficulties such as anxiety, depression, post-traumatic stress disorder (PTSD) and substance misuse among veterans compared to that of the general population [1] [2] [3] [4]. A recent study showed an increase in PTSD rates in the UK military from 4% to 6.2% between 2010 and 2018 [1]. When restricted to only veterans (in the UK defined as having completed one day of paid service) the prevalence rate was 9%. Further analysis of this population suggested PTSD prevalence rates of over 17% in veterans who had been deployed within combat roles to Iraq or Afghanistan. These rates suggest that veterans; particularly those in combat roles, are at increased risk of experiencing symptoms of PTSD.

Despite these rates of PTSD, much of the literature has focused on the primary trauma survivor, less research has looked at the impact on the veteran's partner.

There is emerging research which suggests partners of veterans with mental health difficulties are at higher risk of developing mental health difficulties compared to that of the general population [5] and other caregiving populations [6]. In a survey of UK partners living alongside treatment seeking veterans, 17% presented with PTSD symptoms themselves, approximately three times (6%) that of the general population [7].

It has been proposed the process of secondary traumatisation is likely to account for the heightened risk of partners experiencing symptoms of PTSD [8]. This process has been described as one where those who are in close contact with survivors of trauma are likely to experience considerable emotional distress and similar reactions to trauma, indirectly becoming victims themselves [9]. Other explanations suggest the chronic stress of living alongside symptoms is likely to lead to emotional and relationship strain, for example, social isolation, increased emotional pressure and inequality in the relationship [10].

Despite military partners reporting psychological difficulties, evidence suggests only a minority report seeking support [7]. Barriers to engagement may include, feeling embarrassed about seeking support or being perceived as weak by others, as well as stigma related beliefs such as thinking others would not understand, being too embarrassed to ask for help and being concerned with what others might think [11]. In addition, partners can also experience the social isolation and avoidance symptoms that are commonly reported among treatment seeking veterans [12].

In greater recognition of the needs of military partners, more integrated models which offer support to partners have been trialled over the past couple of decades and the US and Australia have taken a leading role. To date, studies have shown these interventions to be effective [13]. Many of the interventions that have been developed include psychoeducation and have been found to effectively improve partners psychological difficulties and relationships with the treatment seeking veteran [14]. In addition, educating partners about PTSD has been associated with veterans reporting increased support and higher levels of engagement in therapy with partners reporting that it enabled them to interpret the veteran's behaviours as symptoms which lowered their distress levels [15]. In contrast, studies have shown partners who have not received any education may misinterpret symptoms of PTSD [16].

Research has shown the importance of adapting support for military partners to meet the cultural needs present in different countries [17] [18] [19]. To date no such programmes have been adapted to the UK population. The purpose of this study was to explore the feasibility of offering an evidence-based support programme to veterans' partners who themselves have mental health difficulties or are at risk of developing mental health difficulties.

Method

The study employed a noncontrolled intervention study design to explore the feasibility of piloting an intervention to support the partners of treatment seeking veterans for mental health difficulties.

Settings

Participants for this study were recruited from Combat Stress (CS). CS is a national charity in the UK that provides mental health services to veterans. Recruitment was done by writing to veterans who had

accessed services from CS between January 2016 and January 2017 asking them to pass on information about the study to their partners providing they consented and were in an intimate relationship. A minimum sample size of 31 had been identified to detect a 0.5% effect size using the General Health Questionnaire (GHQ-12) between the start and the end of intervention at 80% power and 5% significance level. This is based on the prevalence rates as observed in a previous study profiling mental health needs of this group of participants [7]

Procedure

An audit was undertaken to establish where the highest number of veteran referrals in the past twelve months (January 2016-January 2017) were populated across the UK. This helped determine where the intervention would be piloted across the UK. Based on this information and demand for support, nine city locations across the UK were chosen.

An options review was carried out of existing programmes on which to base the current one on. When conducting this review, several criteria were used to screen potential interventions. Firstly, the potential intervention needed to consider the military context specifically. Secondly, they were not explicitly about providing therapy and would replicate existing mainstream NHS services. Thirdly, the intervention needed to go beyond peer support and involve a therapist to support a structured programme of strategies to support the partner and also the environment within which the partner and veteran live. Fourthly, the intervention needed to be operationalised practically. As such, the intervention needs to be time limited and deliverable in a limited number of sessions to decrease the likelihood of participants dropping out. In addition, the treatment needed to be based in the community to make it more accessible and provide face to face contact. Finally, the intervention needs to have efficacy beyond the end of the intervention. Following this review, two psychoeducation support programmes SAFE (Support and Family Education Programme, Sherman, 2008) and Homefront Strong [20] which have been found to be effective and widely accepted by US military families were used to guide the development of this UK specific programme (The Together Programme). TTP. The development of TTP was done in accordance to The Medical Research Council guidance into the development of complex interventions [21].

TTP consisted of ten sessions, organised into two categories: firstly, psychoeducation about PTSD and common mental health difficulties in veterans and secondly self-management strategies and skills training for participants themselves. Although each session was structured and dyadic in its design, there was ample opportunity for participants to share in their experiences. These sessions were delivered across five consecutive weeks. A mid programme review was also facilitated by study coordinator by phone to check in with participants. A CBT protocol was used to underpin the programme.

The first session "understanding PTSD and mental illness. How can I help?" And "living alongside mental illness and PTSD", provides psychoeducation and normalises the reactions of partners. It provides opportunity for partners to share their experiences living alongside mental illness and discusses how these can be qualitatively different. A CBT hot cross bun model is outlined to illustrate how trauma experiences can impact upon veterans' appraisals of everyday situations and the impact on partners are explored too. Practical strategies like grounding are introduced and are given as a homework activity for partners to do with the veteran, if willing.

Second, "understanding anger and PTSD" and "finding me again" uses the anger episodes model [22] to help partners gain an understanding about anger and PTSD. Behavioural and cognitive strategies are presented to partners to help the veteran manage anger at each stage. In addition, caregiver responses are discussed using the Karp model [23] and reflected upon with an emphasis on partners taking care of their needs. The group practices progressive muscle relaxation at the end of the session.

Third, "communicating and reconnecting with partner" reviews communication styles and provides techniques for partners to communicate assertively with the veteran. Reconnecting and developing intimacy in the relationship is also addressed. Part two of session three "How to explain PTSD to children and others" begins by considering the experiences of stigma of partners. Internal and external stigma are differentiated,

and the group are encouraged to identify those relevant to themselves in an individual task. Effective ways for talking to children and others about PTSD are explored. Partners are given specific techniques and tips for talking to children. A mindfulness exercise is practiced with the group at the end of the session.

In the fourth session "supporting my partner with low mood and depression" defines depression and the group are instructed about identifying early warning signs that may indicate risk for suicide and how to create a personalised crisis plan with the veteran. Emphasis was placed on removing potential blocks in communication and correcting myths about suicide. Value based behavioural strategies were given to partners to help address veteran's low mood and depression. Effective means of coping with emotions were explored as a group, including; thought diffusion and compassion-based techniques.

Finally, "moving forward" begins with a review of the themes covered in the programme. The group engages in a reflective discussion about how to make sense of their experiences living alongside PTSD, empowering partners to focus on qualities they have developed. A wellness plan is explored and given as a tool to help them to individually maintain their wellbeing. A list of legitimate sights is also presented [24] and the group are invited to add any they fee relevant as a reminder about self-care. The session closes with a goodbye exercise and mindfulness visualisation to empower and give partners hope.

Co-Production of Programme

Service user involvement was sought by interviewing 20 partners to learn about what they would value from a support programme. and give consideration to practical needs like; length of programme and sessions, distance of travel to group, preference for telephone support, size of group, potential obstacles and enablers for attendance, expectations and goals of attending a programme of this kind. These partners were attending a one off psychoeducation session of two hours which is tailored for significant others of veterans engaging in a six week residential treatment programme. None of the partners who had taken part in these interviews were included in the target population during the intervention.

Clinicians with relevant expertise were also consulted with during the development of the intervention about the what themes should be covered and the format of the programme.

Participants

Participants were considered eligible for this pilot study if the veteran had been diagnosed with a mental health difficulty related to their military service. Participants were required to be in an intimate relationship with the veteran during recruitment, which was determined during screening by the project coordinator.

Due to careful consideration of participants privacy and confidentiality, no veterans were permitted to attend the group sessions. Other family members were also not eligible to attend because the content of the programme had been specifically written for partners in intimate relationship with the veteran. Intimacy is defined as the quality of being close, the ability to self-disclose and the desire to be affectionate with another person [25]. This definition was used to determine if a partner was in an intimate relationship with the veteran during screening.

Measures

Data for this study was collected at three time points, before attending the programme, upon completion and three-months after completing the programme. At the beginning of TTP participants were asked to provide demographic information related to age, sex, no of dependents, if they had served in the military themselves, employment status, quality of life, living arrangements and length of relationship with veteran. In addition, seven standardised measures were administered. At the end of the programme participants were asked to complete the same questionnaires and provide qualitative feedback in a programme evaluation. Measures were again sent to participants three months after to assess for change in outcomes. This questionnaire was sent three times to elicit data.

Mental Health Outcomes

Common mental health difficulties (CMD), such as anxiety and depression were explored using The General Health Questionnaire (GHQ-12) [26], this is a 12-item self-administered instrument. A cut off score of

12 or above was used to identify rates. Participants completed the Secondary Traumatic Scale, (STSS) [27], a 17 item self-report measure of secondary trauma symptoms using a five-point Likert scale. A cut score of 28 and above was used to indicate secondary trauma. In addition, a three item Alcohol Use Disorders Identification Test (AUDIT -C) [28] with a cut of score of five and above was used to indicate problematic drinking.

Relationship Outcomes

The seven item Dyadic Adjustment Scale (DAS) [29] and Relationship Assessment Scale (RAS) [30] were administered upon invitation to attend the programme, after screening. The functioning measures included perceived social support (MSPSS) [31] and general self-efficacy (GSE).

Service User Feedback

Qualitative data was collected asking participants to suggest three most helpful things about TTP and three areas that could be improved. Content analysis was then used to elucidate the most frequently mentioned themes. Content analysis was performed by looking at the most frequently endorsed positive and negative statements made by participants. These were then grouped into common themes and the most prevalent themes reported

Analysis

Descriptive statistics were initially used to explore demographics of participants. Mann Whitley U Tests were used to compare the health scores between responders and non-responders at three months. The final stage of analysis involved running unpaired Two samples T Test to compare primary and secondary outcomes following attendance to TTP. Effect sizes between pre-programme and follow up for primary measures were calculated.

Ethics

Approval for this study was granted by the Combat Stress Research committee. Participants provided informed written consent to participate in the study and data was processed and stored in compliance with General Protection Regulation (GDPR).

Results

Demographic Characteristics

All participants in this study were female. Unfortunately, because no male partners expressed interest in attending the programme or were screened for this pilot study it was not possible to elucidate what barriers to care there may be for this population. The average age of participants attending was 47 years. Over half of the sample had been in the relationship with their partner for over nine years with half of participants having dependents. Most of the sample (63%) were in employment. A small proportion of participants had served in the military themselves (11%), all of which had not seen conflict in their military careers (Table 1). 45% of participants identified their quality of life to be low before taking part in the intervention.

Baseline mental health outcomes in Table 1 show 79% of participants met diagnostic criteria for anxiety and depression and 94% met criteria for secondary PTSD. A smaller proportion of participants (20%) met caseness for alcohol misuse at the start of this study.

Participant Engagement

77 participants were invited to attend the programme. Of these 56/77 (73%) commenced the programme of which 51/56 (91%) participants completed all five weekly sessions. In total five participants who commenced the programme dropped out. Reasons given for participants not being able to complete the programme include; health difficulties, childcare, relationship separation and other caregiving responsibilities. Of the 51 participants who completed, 44/51 (86%) were followed up at three months and completed outcome measures.

Non-Responder Study

No significant differences were observed in social demographic or mental health outcomes between those who responded at three months and those who did not. While non-responding participants reported higher levels of secondary traumatic stress symptoms in comparison with those who did respond, this did not reach statistical significance (Table 2).

Table 1. Characteristics of study sample (n=56)

Characteristics	Number (%)
Sex	
Female	56.0 (100%)
Male	0.0 (0%)
Average age	47 years
Living with partner	
Yes	47 (83.9%)
No	9 (16.1%)
Dependents	
Yes	28 (50.0%)
No	28 (50.0%)
Length of relationship	
<9 years	23 (41.6%)
>9 years	33 (58.9.0%)
Served in military	
Yes	6 (10.7%)
No	50 (89.3%)
Employment status	
Working	35 (62.5%)
Not working	21 (37.5%)
Education	
Low (A Levels/HNDs/NVQ/GCSEs)	38 (67.9%)
High (Degree/Postgrad)	18 (32.1%)
Quality of life	
Low	25 (44.6%)
High	31 (55.4%)
Characteristics	Number (%)
Baseline mental health outcomes	
GHQ-12 (Meets caseness)	
Yes	44 (78.6%)
No	12 (21.4%)
SPTSD (Meets caseness)	
Yes	51 (94.4%)
No	3 (5.6%)
AUDIT C (Meets caseness)	
Yes	11 (19.6%)
No	45 (80.4%)
Social support	
Low support	21 (37.5%)
Moderate-High support	35 (62.5%)

Table 2. Mental health outcomes and sociodemographic characteristics of responders and non-responders at 3 months follow up (n=56)

	Responders (n=44)	Non responders (n=12)	P value
Primary outcomes at baseline	Mean (SD)	Mean (SD)	
GHQ-12	17.1 (6.0)	17.2 (9.2)	0.67
STSS	45.4 (12.4)	48.3 (13.5)	0.5
Secondary outcomes at baseline			
GSE	18.3 (5.8)	19.7 (6.8)	0.36
MSPSS	4.5 (1.2)	4.5 (0.9)	0.73
DAS	17.4 (4.8)	15.3 (5.5)	0.24
RAS	17.6 (11.2)	14.4 (10.0)	0.27
AUDIT C	2.7 (2.3)	3.8 (6.5)	0.56
Demographics			
Age	45.9 (9.7)	48.8 (11.6)	0.4
Living with partner			
Yes	37 (84.1%)	10 (83.3%)	0.95
No	7 (15.9)	2 (16.7)	
Dependents			
Yes	24 (54.6)	4 (33.3)	0.2
No	20 (45.5)	8 (66.7)	
Served in military			
Yes	4 (9.1)	2 (16.7)	0.45
No	40 (90.9)	10 (83.3)	

Primary and Secondary Outcome Measures

Changes in primary and secondary outcome measures between the start of treatment and at three months follow up are presented in Table 3. These results demonstrate significant score reductions for CMD. At three months follow up, scores had fallen from above the cut off score of 12 to subthreshold levels of anxiety and depression (17.1 to 14.0, $p<0.05$). A medium effect size (0.48) was observed.

Significant reductions were observed in secondary traumatic stress symptoms. Changes in mean secondary traumatic scale scores reduced from being above the cut off score of 38 to below the threshold score (45.1 to 40.7, $p<0.05$). A medium effect size was observed (0.47). Overall these reductions appeared to be similar to those measured for anxiety and depression highlighting a global improvement in mental health and wellbeing after engaging in the five-week programme.

Improvements in secondary outcomes such as relationship satisfaction were observed for participants after completing the programme (17.9 to 23.0, $p>0.05$) however these were not found to be significant statistically. Modest improvements in participants ratings of alcohol usage, social support, self-efficacy after completing the programme were observed however, these changes did not reach statistical significance.

Programme Evaluation

Four key themes which emerged from the programme evaluation are outlined below (Table 4). These themes have been organised into four categories; taking care of my own needs, length of programme and session timings, barriers to accessing support and conjoint sessions with their veteran partner.

Taking Care of all my Own Needs

Participants highlighted the importance of having a safe environment to share without feeling judged. It was described by these participants that they felt misunderstood and isolated from friends and family members. They reported hiding their own feelings and

Table 3. Primary and secondary outcomes before and after The Together Programme (n=51)

	Pre-Programme Mean score (SD) (n=56)	Follow-up Mean score (SD) (n=44)	P- Value	Effect size
Primary Outcomes				
GHQ-12	17.1 (6.5)	14.0 (6.5)	0.01*	0.48
STSS	45.1 (12.9)	40.7 (1.9)	0.05*	0.47
Secondary Outcomes				
GSE	18.4 (6.2)	20.7 (4.9)	0.97	NA
MSPSS	4.5 (1.1)	4.7 (0.75)	0.75	NA
DAS	17.3 (4.7)	17.1 (5.5)	0.43	NA
RAS	17.9 (11.1)	23.0 (7.7)	0.99	NA
AUDIT	2.5 (2.3)	2.4 (2.1)	0.46	NA

Note: Effect size, 0.2=small, 0.5=medium and 0.8and above=large.

Table 4. Table summarising the key themes from programme evaluation

Evaluation question	Key themes
1.Top 3 things you liked about the groups	Coping strategies for self
	Normalisation: Meeting, sharing and listening to other partners
	Understanding of PTSD
2.Top 3 things you disliked about the groups	Nothing
	Programme is not long enough
	Longer sessions are needed
3.Things you would like to see changed about the groups to better meet your needs	Longer programme & longer sessions
	Conjoint sessions with veteran
	Top up sessions
4.Obstacles there were that could have prevented you from attending these sessions?	Work/Employers
	Travelling
	Childcare

needs from their veteran partner in order to preserve the relationship. Participants said the group offered them a space for them to openly about their own experiences and develop coping strategies for themselves as well as gain a better understanding of PTSD.

Length of Programme and Session Timings

Majority of participants reported they would like an overall longer programme as extra sessions would allow more opportunity to consolidate the knowledge gathered during the programme and afford more time for sharing experiences. Participants also expressed the need to revisit material covered to help maintain gains.

Barriers to Accessing Support

One of the main obstacles which participants noted to potentially hamper their engagement in the programme included work or employers. Although participants were offered a letter of support for their employer some participants reported they did not feel willing to disclose about the veteran's mental health difficulties. Other participants talked about their sense of responsibility of being the primary financial provider in the relationship and taking time out for work would be too greater risk. Other obstacles for participants included; travelling to the venue and time away from the veteran., often feeling anxious or guilty about leaving the veteran. Childcare was also noted to be a challenging roadblock for participants.

Conjoint Sessions with Veteran

Majority of participants suggested conjoint 1:1 session with their veteran partner to be incorporated into the programme. Participants reported having this additional form of support would help develop a shared narrative, correct misunderstandings in communication and promote joint problem solving to help ameliorate the veteran's symptoms.

Discussion

This paper reported the feasibility and acceptability of a five-week programme for veterans' partners who themselves are at risk of developing mental health difficulties. High rates of engagement and programme completion were observed. These rates compare favourably to similar programmes, though they are longer. For example, SAFE is an 18-session intervention which have yielded lower retention rates (6.3 out of 18 sessions) [15]. Data which captured the reasons why suitable participants could not engage in the programme indicate the need for improved accessibility. Practical barriers identified included; sessions taking place during the weekday, childcare, travel and financial responsibilities. Future research maybe needed to explore other platforms for delivering TTP in adjunct to face to face-support.

Significant reductions in both symptoms of secondary traumatisation stress and CMD were observed suggesting the successful cultural adaption of these psychoeducational family support interventions to meet the needs of a UK population. It may be suggested the psychoeducation, structured skill-based approach is effective in meeting the clinical needs of veteran partners. It is encouraging to observe these reductions in primary outcomes are maintained at three months follow up.

In contrast, we did not find significant improvements in participants relationship satisfaction, which may suggest the structure and psychoeducation provided in TTP does not specifically address relationship dynamics and interpersonal skills which are likely to enhance relationship communication and quality. These findings are reinforced by [32] who propose both skills and education for PTSD enables couples to work together to overcome avoidance and other symptoms. In addition, this togetherness is likely to serve as an important motivator and lead to greater relationship satisfaction.

Although participants scores on the AUDIT recorded alcohol difficulties were lower after attending TTP, these did not reach statistical significance. This may be explained by the content of this programme which excluded specific psychoeducation or guidance around managing harmful drinking patterns. Taken together these findings highlight the numerous benefits TTP has on addressing multiple domains including, psychological distress, support for veteran-partner relationships and systemic effects.

Findings of this study suggested the five-week intervention to be an acceptable medium of support with all participants (100%) who completed TTP recommending it to their family and friends. Participants

highly rated the programme for providing a safe place to share their experiences. It appeared that normalising their experiences helped them to feel understood by others who 'just get it'. Many participants had not talked about their own struggles of caring for their partner prior to attending TTP and had previously perceived their own wellbeing to being less important to looking after their veteran partner. Normalising these experiences appeared to help participants feel 'accepted' as normal and that the difficulties they were suffering were legitimate and worthy of seeking support.

Previous studies of similar interventions have shown improvements in domains like social support [33] [34]. Although participants in the current study consistently reported a reduced sense of isolation, levels of perceived social support did not significantly increase implying social support did not generalise beyond the context of the group. Another explanation could be, the programme may not be long enough as echoed in participants feedback. The need for more sessions to increase opportunity for participants to expand their social support network is an important consideration to be made moving forward, in conjunction with trying to maintain high retention rates.

Strengths and Limitations

This pilot profited from strong ecological validity. This was because all of the participants were in relationships with veterans who had a mental health diagnosis, thus the sample used in this study is likely to be representative of the clinical population of help seeking veterans. Furthermore, we had high rates of programme completion and were able to successfully follow up 86% of those who completed the programme and no differences were present between participants were followed up or not. Finally, using a manualised approach increased our confidence in fidelity of the intervention being received. However, some groups or individuals would have benefited from a more flexible approach like having access to more than one telephone support session.

A number of limitations need to be considered when interpreting the described findings; We did not employ a randomised control trial design. Therefore, because we were not able to use both randomised and control conditions it is uncertain how much influence confounding variables may have had on the gains observed. For example, we did not control for whether participants had received support prior attending TTP. However, this was a pilot study and given the promising findings reported it would be impossible to conduct further controlled study to formally test the efficacy of TTP.

Secondly, the sample of participants included in this study may only represent partners of the 'most ill' veterans, for example data suggests 82% of veterans seeking this source of help have PTSD and comorbidities of three or more mental health needs and physical needs [34].

It is noted only partners of veterans actively seeking help or where the veteran had consented for their partner to have access to information about TTP were eligible for attending this study. As a result, we may be excluding partners the opportunity to engage in the programme who might need support. Unfortunately, it is not known if invitation responses may have influenced participants interest and engagement in the programme. Greater understanding of veteran's altitudes towards their partners engagement in support is needed and educating the veteran about what the programme entails may allay concerns.

The aim of this study was to explore the feasibility of offering support to the partners of veterans living alongside veterans with PTSD. We used a noncontrolled design, and while limitations exist because of the lack of randomisation or control group, the data presented suggests cautious optimism for the efficacy of TTP to support the needs of individuals in romantic relationships living alongside veterans with mental health difficulties.

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