The military spouse experience of living alongside their serving/veteran partner with a mental health issue: A systematic review and narrative synthesis.

Emma Senior[1⁋*], Amanda Clarke[1&], Gemma Wilson-Menzfeld[1&].

[1]Department of Nursing, Midwifery and Health, Northumbria University, Newcastle-Upon-Tyne, United Kingdom.

*Emma Senior

E-mail: emma.senior@northumbria.ac.uk

⁋This author is senior author of this work

&These authors also contributed equally to this work

Abstract

Introduction

Military healthcare studies have reported a wide range of mental health issues amongst military personnel. Globally, mental health issues are one of the main causes of ill health. Military personnel have a greater prevalence of mental health issues than that of the general population. The impact of mental health issues can be wide and far reaching for family and carers. This systematic narrative review explores the military spouse experience of living alongside their serving or veteran partner with a mental health issue.

Methods

The systematic review performed was based on the PRISMA guide for searching, screening, selecting papers for data extraction and evaluation. Studies were identified from CINHAL, ASSIA, Proquest Psychology, Proquest Nursing & Allied Health source, Proquest Dissertations & Theses, ETHOS, PsychArticles, Hospital collection, Medline, Science Direct Freedom Collection and hand searching of citations and reference lists.

Results

Twenty-seven studies were included in the narrative synthesis. Five overarching themes from the experiences of military spouses' living alongside their serving/veteran partners mental health issue were identified: caregiver burden, intimate relationships, psychological/psychosocial effects on the spouse, mental health service provision and spouse's knowledge and management of symptoms

Conclusions

The systematic review and narrative synthesis identified that the majority of studies focused on spouses of veterans, very few were specific to serving military personnel, but similarities were noted. Findings suggest that care burden and a negative impact on the intimate relationship is evident, therefore highlight a need to support and protect the military spouse and their serving partner. Likewise, there is a need for greater knowledge, access and inclusion of the military spouse, in the care and treatment provision of their serving partner's mental health issue.

Introduction

Globally, mental health issues are one of the main causes of ill health, accounting for 13% of disease burden and, by 2030, this figure is predicted to rise to 15% [1, 2]. Worldwide, major depression is considered to be the second leading cause of disability, [3] with depression, anxiety and drug use reported as the primary drivers of disability in those aged between 20-29 years [4]. It is also estimated that a quarter of the population will at some point in their lives suffer from a mental health illness [5].

Military studies have reported a wide range of mental health issues with active serving personnel [6, 7] and veterans alike [8, 9]. Indicative of many roles within the military, is the exposure to combat and trauma [8, 9]. High combat exposure has been associated with a deterioration in mental health and an increased risk of suicide [8, 9]. Figures suggest for military personnel the prevalence of depression is between 23-26 % [6], considerably higher than the general population globally, where the figure is estimated at 13-15% [1]. It is also

suggested that up to 60% of military personnel with a mental health issue will not seek treatment [10].

In general, a lack of healthcare management models, resulting from underfunding and austerity measures [11], has led to care provision for those with a mental health issue predominantly falling to family members [12]. The impact on the quality of life for family caregivers can be wide and far reaching [13]. Studies suggest a correlation between care burden and adverse health effects, such as increased stress, physical exhaustion, anxiety and depression for the caregiver [14].

From a military context, the adverse health effects of the caregiver are further compounded, because even without the existence of a mental health issue, it is recognised that there are significant effects on the military family unit, such as long separations, and 24 hour working patterns. This is especially pertinent during times of deployment with military families experiencing a higher prevalence of psychological disorders [6]. It has also been reported that the presence of a mental health issue is the second most leading cause of divorce within serving military populations [15]. Whilst there is a plethora of literature surrounding families and deployment [16, 17], a preliminary scope of the literature showed that little is known about the experience of military spouses living alongside serving partners with a mental health issue. This literature review aims to explore the experience of the military spouse during their serving partners mental health issue.

Materials and Methods

In acknowledgment of the limited evidence around the research topic found from the initial scope of the literature, a systematic review with narrative synthesis was executed to enable the inclusion of a wide range of literature and research designs [18]. Qualitative evidence can answer different but often complementary questions to quantitative evidence [18]. A

systematic review assumes a narrative synthesis approach concerned with generating new insights and recommendations textually [18, 19]. Narrative synthesis brings together findings from all the included studies to capture conclusions. Using a deductive approach, these conclusions form thematic groups based on the body of evidence as a whole [18, 19]. The review did, however, follow the steps documented in the Preferred Reporting Items for Systematic review and Meta-Analysis (PRISMA) statement [24]. **See Supporting Information: PRISMA checklist.**

This review specifically focuses on the spouse experience, and only aims to include studies whereby the spouse is identified in the aim or outcome. From the research aim, search terms were developed using the framework PICO (Table 1) and a systematic search strategy (Fig 1) was utilised to ensure that the searches are comprehensive and transparent [18].

Table 1: PICO framework.

Search term development	
P - Patient or population	(Wife; husband; spouse; partner) AND (armed forces; Army; Navy; Airforce; military; soldier/s – truncated to soldi*, tri-service; sailor/s; airman/airmen; marine)
I - Intervention	Mental; psychological; psychology; psychologist (truncated to psychologi*)
C – Comparison (if applicable)	Not applicable
O - Outcome	Support; experience, care; caring; carer (truncated to car*)

Suitable databases were identified and used for the searches: CINHAL, ASSIA, Proquest Psychology, Proquest Nursing & Allied Health source, Proquest Dissertations & Theses, ETHOS, PsychArticles, Hospital collection, Medline, Science Direct Freedom Collection. All relevant search terms were utilised, and initial searches yielded limited literature specific to serving military spouses, so the parameters of the search were widened to include veteran spouses. The time parameter was also broadened to include any papers from any publication date; however, consideration was given only to those papers written in the English language.

Owing to the cultural complexities, studies conducted with westernised military spouses published in peer reviewed English language journals were used. The searches were completed between July 2021 and March 2022. A total of one hundred and fifty-seven papers were retrieved from the initial searches with ninety-three being deemed of some relevance following a title and abstract sift (Fig1).

Fig 1. Systematic search strategy

Twenty six papers were removed as duplicates and following a full-text search, a further forty eight papers were excluded as: only passing mention of spouse (n=6), the spouse experience was specific to during the time of deployment (n=13), the focus of the study was the serving/veteran partner (n=18), the focus was directed at a treatment or therapy (n=8) and the remaining were literature reviews (n=3). Reference and citation searches were executed on all relevant papers, resulting in eight further papers eligible for inclusion bringing the total to twenty-seven.

From the twenty-seven papers included in the review, the study aim, sample size, method and tools plus the location of study were extracted (Fig 2). Steps 2–4 of the Economic Social Research Council's (ESRC) guidance on the conduct of narrative synthesis was employed [19]. This guidance proposes four stages; however, the process is iterative, encouraging the researcher to move freely within each stage and not approach them linearly in a sequential manner [19]. Stage one was excluded since developing a theoretical model of how an intervention works and for whom was not an aim of the review [19]. In stage 2 and 3 the initial synthesis of the findings in the included papers was completed followed by an exploration of the relationship between the findings. Stage 4 required the research team to assess the quality of the synthesis.

Fig 2. Overview of papers

To reduce the risk of bias, all papers included in the review were quality assessed. A process of critical appraisal was executed to determine if the literature was trustworthy, relevant and appropriate to this study [19, 20]. Identifying the strengths and weaknesses in each study allows the researcher the ability to give more weight to stronger papers [21]. The final selection of twenty-seven papers up for scrutiny comprised of eleven quantitative, fourteen qualitative and two mixed methods studies; however, it was the qualitative element within these studies that was of interest for the review. All the quantitative studies selected including mixed methods studies, employed questionnaires/surveys for data collection. An adapted quality assessment tool for quantitative papers was applied to each study [22]. The studies were assessed against seven sections which were ranked as either strong, moderate or weak. An overall ranking was then applied (Supporting Information 2: Quantitative studies quality ranking). For the remaining sixteen qualitative/mixed methods papers, criteria developed by Kuper, Lingard and Levinson [23] was used to assess domains such as overall coherence of the study, sampling, data collection, analysis, transferability, and ethical considerations. Studies were ranked from unclear, acceptable, good or very good. Papers were included if they ranked acceptable or above in four of the six domains (Supporting Information 3: Qualitative studies quality ranking)

Results –

Paper Characteristics

The initial step in identifying thematic groups is to assess the characteristics of the selected studies [18]. The fundamental characteristics within each the twenty-seven studies are identified in Table 2.

152 Table 2. Paper characteristics.

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Study ID number	Author	War related				Average relationship(years)	Specific to Spouse only	Couple
		Unspecified	OEF/OIF	OEF/OIF/Vietnam	Vietnam/Persian Gulf			
25	Allen et al.		X			4.7		X
26	Beckham et al.				X	Not stated		X
27	Brown	X				Not stated	X	
28	Buchanan et al.		X			12.8		X
29	Campbell & Renshaw		X			11.7		X
30	Daniels		X			Not stated	X	
31	Iniedu	X				Not stated	X	
32	Jordan et al.				X	Not stated		X
33	Lyons				X	Not stated	X	
34	Manguano-Mire et al.	X				Not stated	X	
35	Mansfield et al.	X				26.7	X	
36	Renshaw & Caska			X – 2 STUDY		Not stated	X	
37	Riggs et al.				X	Not stated		X
38	Sautter et al.				X	Not stated		X
39	Sherman et al.				X	Not stated		X
40	Temple et al.		X			Not stated	X	
41	Verbosky & Ryan				X	US	X	
42	Waddell et al.			X		42	X	
43	Woods		X			9.3	X	
44	Yambo et al.	X				US	X	
45	Calhoun et al.				X	Not stated		X
46	Thandi et al.		X			Not stated	X	
47	Martinez		X			Not stated	X	
48	Murphy et al.	X				18.4	X	
49	Waddell et al.		X			14.9	X	
50	Brickell et al.	X				Not stated	X	
51	Johnstone & Cogan	X				Not stated	X	

The focus differed amongst the studies, with nine studies including both veteran and/or serving partner as well as the spouse, denoting the spouse element was part of a much larger study [25, 26, 28, 29, 32, 37-39, 45]. In these cases, the spouse findings have been used within this review. Eighteen studies had specific focus on the spouse [27, 30, 31, 33-36, 40-44, 46-51]. Six studies had a specific focus on the spouse experience whilst their partner was still serving [25, 27, 29, 40, 43, 46], the other twenty one studies focused on the spouse experience cohabiting with the veteran population [26, 28, 30-39, 41, 42, 44, 45 47-51]. All but six studies [39, 46 -48, 50, 51] paid specific attention to Post-traumatic Stress Disorder (PTSD) and PTSD symptoms only. Within fourteen studies the serving/veteran partner had a clinical PTSD diagnosis [26-31, 33-35, 38, 41-44, 45, 49]. Seven studies self-reported PTSD with 4 studies [25, 32, 36, 37] using a clinically recognised symptom assessment and classification tool (DSM-III or DSM-IV) to justify participant selection.

Nineteen studies identified specific military conflicts. Nine studies specifically focused on more recent conflicts, Operation Enduring Freedom (OEF) in Afghanistan and Operation Iraqi Freedom (OIF) in Iraq [25, 28-30, 40, 43, 46, 47, 49] and eight studies related only to the Vietnam or Persian Gulf conflicts [26, 32, 33, 37-39, 41, 45]. One study included participants from both Vietnam and OEF/OIF [42] whilst one study [36] compared and contrasted the findings of two separate studies, where study one focused on OEF/OIF and study two focused on Vietnam. Eight studies did not make any reference to any specific conflict [27, 31, 34, 35, 44, 48, 50, 51].

In all studies included within this review the gender of the spouse was majority female. Nine studies acknowledged the duration of the relationship with six studies identifying an average of up to eighteen years [25, 28, 29, 43, 48, 49] and two studies having an average of twenty-six years plus [35, 42]. Nineteen of the studies did not specify a duration or an average was not calculated [26, 27, 30-34, 36-41, 44, 45, 46, 47, 50, 51].

Across the twenty-seven studies a range of recruitment methods were executed. Ten studies utilised formal avenues; four used couples-based marriage enrich workshops [25, 29, 35, 41], six used outpatient PTSD clinics [26, 34, 38, 39, 45, 48], and three via random selection from military records [10, 14, 25]. Six studies used advertising [27, 30, 37, 43, 47, 51], two studies used a snowballing method [11, 22] and two studies utilised a combination of both [40, 41]. Three used third-party services specific to veterans and families [28, 49, 50] and one study recruited from a church group [31].

Twenty-two studies were carried out in the United States of America [25-41, 43-45, 47, 50]. Two studies were carried out in Australia [20, 28] and three studies were completed in the UK [46, 48, 51]. Two studies utilised a mixed method approach [28, 31], however it is the qualitative element of each study that is relevant for this review, fourteen utilised a qualitative method [27, 33, 35, 39-44, 46, 48-51] and eleven utilised a quantitative method [25, 26, 29, 30, 32, 34, 36-38, 45, 47]. A range of data collection methods were utilised. Thirteen studies carried out questionnaires or surveys [25-27, 29-32, 34, 36-38, 45, 47] and two studies offered an opportunity for free text within their questionnaire [28, 35]. Seven studies carried out face-to-face interviews [27, 31, 33, 39, 40, 42, 43, 48, 49, 51], one study used telephone interviews [46], and a further study choose to use a combination of face-to-face and telephone interviews [44]. Only one study opted for observation and documentation [41] and one opted for focus groups [50] as the method of choice.

Whilst there was commonality in the overarching themes being tested within the quantitative studies, that unity was not evident in the selection of tools, inventories and scales used to collect the data. Three different scales were used in more than one study. The PTSD checklist (PCL) was utilised in three studies [25, 29, 36] with a further two studies using a military PTSD checklist (PCL-M) [34, 37]. The Burden Inventory was cited in four studies [26, 34, 35, 37] and a further three studies named the Relationship Assessment Scale. [29, 36,

47]. All the qualitative studies with the exclusion of one [41] used in-depth semi-structured interviews as the chosen method of data collection [27, 31, 33, 39, 40, 42- 44, 46, 48, 49, 51].

Analysis of the retrieved papers was undertaken to identify emerging themes. Five themes were identified; three distinct themes featured in over half of the studies and a further two themes emerged from over 25% of the studies. See Table 3.

The five themes are:

- Theme 1: Caregiver burden
- Theme 2: Relationships
- Theme 3: Psychological/psychosocial effects on the spouse
- Theme 4: Mental health service provision
- Theme 5: Spouse's knowledge and management of PTSD symptoms.

224 Table 3. Themes matrix

Paper number	**Theme identified**				
	Theme 1 Caregiver burden	**Theme 2** Intimate relationship	**Theme 3** Psychological /Psychosocial effects on the spouse	**Theme 4** Mental health service provision	**Theme 5** Spouse's knowledge and management of symptoms
Allen et al.	X	X			
Beckman et al.	X		X		
Brown	X		X	X	
Buchanan et al.				X	X
Campbell & Renshaw		X			
Daniels	X				
Iniedu		X	X		
Jordan et al.		X	X		
Lyons	X	X	X		
Manguno-Mire et al.	X		X		
Mansfield et al.	X	X		X	
Renshaw & Caska		X			
Riggs et al.		X			
Sautter et al.	X				
Sherman et al.	X	X		X	X
Temple et al.	X		X	X	X
Verbosky & Ryan		X	X		
Waddell et al.	X	X	X	X	
Woods		X	X		
Yambo et al.	X	X	X		X
Calhoun et al.	X		X		
Thandi et al.	X	X	X		X
Martinez		X	X		
Murphy et al.			X		X
Waddell et al.	X	X	X	X	
Brickell at al.	X	X	X	X	
Johnstone & Cogan	X		X		X

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Theme 1: Caregiver burden.

Caregiver burden is defined as the extent to which caregivers perceive their emotional or physical health, social life, or financial status to be affected by their caring for an impaired relative [52]. The concept of caregiver burden includes both an objective element such as strained relationships, financial constraints, and a subjective element such as the reactions and responses as a result of the demand placed on the carer [53]. Partners of 'cared for' individuals are potentially at higher risk of experiencing caregiver burden and poorer mental health as opposed to other family, friend or unrelated carers, due to residing together and increased long-term exposure to each other [54].

The notion of caregiver burden was cited in seventeen studies [25-27, 30, 33-36, 38-40, 42, 44-46, 49-51]. Yambo et al. [44] and Sherman et al.'s [39] studies identified two differing types of care burden, first the psychological burden, discussed in theme three and secondly, the burden from the practical and physical actions required from the carer. To provide such support very often required a change in role, which was identified in nine of the studies [27, 33, 35, 39, 40, 42, 44, 46, 49].

Within Brown [27], Lyon [33], Mansfield et al. [35], Temple et al. [40] and Yambo et al.'s [44] studies, the spouses' stated that they felt more like a care provider than a wife; being an advocate for their serving/veteran partners' care. A quote from Temple et al. [40] states:

> *"the relationship feels like I'm a nurse v's the spouse"* (p171).

In some cases, this change of role was taken on voluntarily; however, for some spouses, the change in role felt forced upon them as a result of their serving/veteran partner being unable or unwilling to perform a role within the relationship, [27, 33, 40, 51]. Apparent in four of the studies' findings [27, 35, 39, 42], was the naivety and the disillusionment of spouses

regarding their appreciation of longevity of the caregiver role, thinking that the role would be temporary rather than the emerging long-term/permanent reality which spouses voiced.

One of the ways the long-term impact was identified was the manifestation of the need to constantly maintain the *'peace'* in order to minimise stress for their serving/veteran partner [35, 42, 44]. Mansfield et al.'s [35] study likened it to

> *"walking on eggshells"* (p492).

Noted across the findings of six studies, was that the physical and mental demands felt from years of providing care, increased stress levels, caused frustration and ultimately, fatigue [26, 27, 35, 42, 49, 50]. The participants in Brickell et al. [50] study highlighted how time-consuming caregiving is and consequently led to exhaustion and being emotionally drained. The burden on the caregiver that this sense of dependency caused was echoed in Waddell et al.'s [49] findings.

In addition, a further attributing factor emerged: there was a significant correlation between caregiver burden and the severity of PTSD symptoms. Similarly, three studies [25, 34, 50], found that serving/veteran partners PTSD severity was a reliable predictor of caregiver burden. As well as exploring the severity of symptoms and caregiver burden, Calhoun et al. [45] study included the level of veteran interpersonal violence; an area not examined in other studies. Findings showed that symptom severity was not solely attributable to caregiver adjustment/burden and that there was a significant association between interpersonal violence and both caregiver burden and partner psychological adjustment.

Seven studies also highlighted a link between the need to be engaged in the serving/veteran partner's treatment and caregiver burden [30, 34, 38, 39, 42, 49, 50]. Within all seven studies there was a hope and expectation that by being involved with their serving/veteran partner's

treatment plan, their serving/veteran partner's symptoms would decrease and in turn lessen the overall burden of care they felt.

Theme 2: Intimate relationships

Central to all people's lives are relationships. Relationships come in all shapes and sizes, from casual acquaintances to family/blood connections and to intimate relations [55]. The motivation to establish intimacy with others, is part of a basic human need to belong. Intimacy is a complex concept that is multifaceted, with a range of components within it [56]. Explanations of intimate relationships are founded upon research findings from the fields of psychology, neuroscience, sociology, and from family and communication studies [55].

'Intimate relationship' was a point of discussion within sixteen of the studies [25, 29, 31-33, 35-37, 39, 41, 42-44, 46, 48, 49]. Thandi et al.'s study [46] recognised 'intimacy' as a key theme divided into two subthemes: physical intimacy and emotional intimacy. Three studies portrayed positive relationship views, all of which were noted to be from the participants' discussion of either their relationship prior to deployment and/or the onset of PTSD symptoms, or when the spouses' talked about their commitment to the relationship [27, 29, 33].

Throughout all the studies there was some degree of negative connotation concerning the spouses' relationship with their serving/veteran partner. Allen et al. [25] Campbell and Renshaw [29], and Renshaw and Caska's [36] findings suggest that the serving/veteran partner's recent deployment and subsequent increase in PTSD symptoms was indirectly linked to negative marital functioning but were not statistically significant. Overall, PTSD symptoms and their severity were a specific feature in five of the studies, all of which highlighted a major impact on the marital relationship [31, 32, 35, 37, 50].

One other contributing factor to the impact on the marriage relationship was domestic abuse seen in Jordan et al. [32] and Mansfield et al.'s [35] studies. Mansfield et al. [35] reported that 10.6% of their participants were victims of verbal, emotional or physical abuse. Jordan et al. [32] found the prevalence of abuse by asking for the number of violent acts, including threats of violence over the previous year. For spouses of veterans with PTSD, there was greater incidence of abuse both as victims but also as perpetrators of abuse towards their serving/veteran partner.

Thirteen studies noted changes in personality, difficulties in communication and long-term withdrawal of the serving/veteran partner ultimately leading to emotional numbing or an emotional disconnect [29, 31, 33, 35, 36, 37, 39, 41, 42, 43, 46, 49, 50]. Waddell et al.'s [49] study illustrated how intimacy problems surfaced because of participant experiences of emotional alienation from being unable to express or share thoughts and feelings with their serving/veteran partner. Renshaw and Caska [36] suggested the generalised symptoms, such as social withdrawal are easily misinterpreted by spouses as a reflection about them and/or the relationship, whereas physical symptoms were commonly linked to an illness and therefore, posed minimal threats to the relationship. Nevertheless, this distancing and abandonment manifested in most of the studies as frustration with/or sadness, grief and loneliness about the relationship changes.

Thandi et al. [46] found some participants discussed a change in character in their serving partner and that they were no longer like the person they married, which led less affection and more arguments. Whereas, in Waddell et al. [42] findings, participants viewed their relationships as different to others, prompting the notion that their relationship was not a 'normal' one. In addition, Waddell et al. [42] and Waddell et al. [49] found that the spouses' felt there was a constant striving to intimately connect with their serving/veteran partner, again in order to break down the barrier of emotional detachment. Verbosky and Ryan [41]

and Thandi et al. [46] found that for some participants the lack of intimacy enhanced the spouse's need to be nurturing and caring in order to reconnect. Sherman et al. [39] and Waddell et al.'s [42] studies reported participants expressed loyalty and commitment to their serving/veteran partner and described the importance of providing emotional and behavioural support.

This dedication to the relationship was mirrored in Brown [27], Iniedu [31], Lyons [33], Mansfield et al. [35] and Woods [43] findings, although, all reported an ongoing inner struggle as to whether to stay or leave the relationship for most participants. Factors such as children, domestic abuse were listed as reasons to leave; however, these were often overruled by guilt, love, a sense of obligation, and fear that their serving/veteran partner would worsen if they left. Longevity of the relationship was also a consideration which featured in both Allen et al. [25] and Woods [43] studies. Woods's [43] study showed that those participants with longer relationships were more likely to remain in the marital relationship believing that the relationship was positive whilst those with younger marital relationships, predominantly viewed their relationship, with more negativity. Whereas Thandi et al. [46] and Martinez [47] identified longevity, not by the length of time in the relationship but that a positive relationship was established over a period of time, post diagnosis

Theme 3: Psychological/Psychosocial effects on the spouse

Seventeen studies reported on the psychological and psychosocial impact experienced by spouses of either serving personal or veterans with PTSD or other mental health illnesses [26, 27, 31-34, 40-42, 44-51]. Psychological distress was a predominant finding throughout the studies. Manguno-Mire et al. [34], Beckman et al. [26] and Iniedu [31] all indicated that the greater the severity of PTSD symptoms experienced by the serving/veteran partner, a greater

346 intensity of psychological distress, dissatisfaction and anxiety was experienced by the spouse.
347 Manguno-Mire et al. [34] and Brickell et al. [50] studies report high individual measures for
348 anxiety, depressive/somatic symptoms and suicidal ideation with the suggestion that the
349 severity of symptoms might warrant clinical intervention. Iniedu's [31] study found that all
350 spouses experienced secondary trauma as a result of their serving/veteran partners PTSD
351 symptoms and were in receipt of medication and/or face-to-face therapy. Lyon [33], Waddell
352 et al. [42], Calhoun et al. [45], Murphy et al. [48] and Johnstone and Cogan [51] reported the
353 negative impact that living with a serving/veteran partner with PTSD had on spouses' mental
354 health by identifying the stress related symptoms they experienced. Manguno-Mire et al.'s
355 [34] study further identified predictors specific to the levels of psychological distress
356 experienced. Psychological distress was found to decrease when there was greater
357 involvement with the serving/veteran partner's care and treatment; however, if there had been
358 a recent episode of mental health treatment or an increased perceived threat from the
359 serving/veteran partner's PTSD symptoms, the psychological distress felt by the spouses was
360 also increased. Whereas Martinez [47] examined attachment style and the level of attachment
361 within the relationship and the subsequent effect on psychological and physical symptoms.
362 He found that caregivers with an anxious attachment style were more likely to experience
363 physical symptoms and higher incidents of physiological stress than those with a non-anxious
364 attachment style.

365 Manguno-Mire et al.'s [34] study identified that 60% of participants reported that their
366 serving/veteran partner posed a physical threat to their wellbeing. The threat and
367 psychological distress were also demonstrated in other studies [40, 46, 47].

368 Murphy et al. [48] identified the volatile environment where some of the participants likened
369 it to the metaphor:

370 *'walking on eggshells'* (p5);

371 Albeit a different interpretation of the same metaphor highlighted in the earlier theme. The
372 '*not knowing'* and loss of predictability invariably leads to hypervigilance and hyper-
373 attentiveness which was documented in nine studies [27, 33, 42, 44-46, 48, 49, 51].
374 Remaining hypervigilant and hyperattentive to the actions and moods of their serving/veteran
375 partner has been aligned with the need to find a resolution and an attempt to create peace and
376 healing [33]. Yambo et al. [42], and Johnstone and Cogan [51] findings suggest an opposing
377 view of an emotionally unstable environment, resulting from the increased feelings of stress
378 from continuous exposure of symptoms, unpredictability and hypervigilance.

379 As well as spouses being hypervigilant and hyperattentive to their serving/veteran partner's
380 needs, seven studies [40-42, 46-49] highlight a distinct level of responsibility felt by the
381 spouse. Fear for their serving/veteran partner, guilt linked to the inability of being able to
382 rectify their serving/veteran partner's difficulties and emotional pain led to feelings of self-
383 hate and blame. Lyon's [33] study demonstrated the move from the early phases of the
384 relationship, referring to spouses' feelings being:

385 *'compatible with the honeymoon period'* (p72)

386 towards the mid phases, where comprehension of the severity of their serving partner's PTSD
387 and subsequent impact on the relationship are realised. The feelings reported were numerous
388 and varied from happiness and laughter to frustration, resentment and/or bitterness, guilt and
389 humiliation; being out of control and trapped; grief and loss to pride for both themselves and
390 their serving/veteran partners. Temple et al. [40] simply described the relationship as a '*roller*
391 *coaster'*.

392 This myriad of feelings continues to be identified throughout six studies [27, 31, 41, 48, 50,
393 51]. The most, negative connotations are described by Brown [27], she points out:

394 *"anger was used 103 times to describe their feelings in comparison to love at 32*
395 *times"* (p250).

396 Verbosky and Ryan [41] state that the spouses experienced an overwhelming sense of
397 helplessness and uncertainty as they were unable to formulate plans to effectively deal with
398 the symptoms and situations they faced, finding it difficult to be assertive at the appropriate
399 time. In contrast, Iniedu [31] and Johnstone and Cogan [51] suggest that there was evidence
400 of empowerment brought about by the spouses struggles to cope and hold everything
401 together; indicative of the concept of post-traumatic growth [57].

402 Amongst the extensive array of feelings identified and the change in behaviours required as a
403 result of the serving/veteran partner's symptoms, a loss of self was identified in five of the
404 qualitative studies [27, 42, 48, 50, 51]. Brown's [27] study illustrated that participants had
405 exhausted all their intrinsic resources and faced a lack of normality which in turn meant that
406 many had neglected responsibility for themselves and indeed, lost themselves in a sense of
407 powerlessness.

408 Whilst Brickell et al.'s [50] study acknowledged the loss of self from an emotive perspective,
409 the loss of physical self-care was also recognised, emerging in their analysis as the most
410 frequently endorsed theme

411 The transference of loss of self into home and work life was evident in eight of the studies
412 [27, 31, 32, 40, 41, 42, 46, 50, 51]. In most, this psychosocial element was identified as
413 "*tremendously stressful*" [27]. Iniedu [31], Temple et al. [40] and Verbosky and Ryan's [41]
414 studies identified that managing either their serving/veteran partners' symptoms and/or their
415 own stresses had significant ramifications on daily life and in some cases had taken over
416 completely. Temple et al. [40] and Waddell et al. [42], and Brickell et al.'s [50] studies
417 suggested that the adaptations and modifications required to daily life meant that the spouses

had to adjust work hours and, in some cases, reduce hours or quit their job. In addition to the impact on their own lives, there was also the identification of children within such scenarios. Brown [27], Jordan et al. [32] and Temple et al. [40] found similarities in the concern voiced regarding the impact on children and their subsequent behaviours.

It could be suggested that as a result of the negative feelings felt by most spouses within the studies there would be correlation with friendship, socialising and external support (discussed in Theme 4). Nine studies explicitly documented findings highlighting friendship and socialisation [27, 32, 40-42, 47, 48, 50, 51]; Waddell et al.'s [42] study briefly highlighted the spouses' social isolation whereas Temple et al.'s [40] study explored this in greater depth, finding that the serving/veteran partners' struggle to leave the house, had an impact on their ability to socialise which led to difficulties maintaining existing friendships or making new ones. Likewise, Brown [27], Verbosky and Ryan [41] and Bickell et al.'s [50] studies indicated that participants merely gave up on any recreational or social activities. Similarly, Murphy et al. [48] and Brickell et al.'s [50] participants felt others (family and friends) who were not living the same experience, simply did not understand. In contrast however, Jordan et al.'s [32] quantitative study found no significant difference in the levels of social isolation.

Theme 4: Mental Health Service Provision.

Mental health service provision emerged as a theme within ten of the papers [27, 28, 35, 39, 40, 42, 46, 48, 49, 50, 51] albeit very briefly in three papers [46, 48, 51]. The ability to liaise with medical or other trained professionals with experience of dealing with PTSD was reflective of the spouses perceived individual needs in three studies [27, 35, 48]. Greater involvement in the serving/veteran partner's care and treatment by the spouse was also noted. Mansfield et al. [33] and Temple et al.'s [40] studies also identified mental health services;

namely, requests for help or receiving care. The spouses' main aims were to gain information in order to inform their care, receive constructive feedback on how they were managing, sharing information that may not have been disclosed by their serving/veteran partner or merely sharing their experiences of daily life. It is evident from the spouses' experiences however, that these requests were not always received positively by the mental health services. Johnstone and Cogan [51] voiced:

'a sense of being invisible, forgotten and overlooked' (p45)

when it related to their serving/veteran partners' treatments. Although Murphy et al.'s [48] findings highlighted the value participants felt by being able to share experiences and gain expert in-depth knowledge from specialist practitioners.

Serving/veteran partners had a clinical diagnosis and had in the past or were currently receiving treatment for their illness in sixteen studies. It was also identified in theme three that psychological distress was prevalent throughout seventeen of the studies [26, 27, 31-34, 40-42, 44-51] with six studies [26, 31-34, 42, 51] recognising that the spouse themselves had to seek help or treatment for stress related symptoms. Mansfield et al.'s [35], Waddell et al.'s [42] and Waddell et al.'s [49] studies described similar feelings albeit related to the attempt as seeking help for themselves, feelings of isolation and invisibility were recognised in comments such as:

"in general family members seem to be left out" and ".....but there is no help for the family" (35. p419).

In Buchanan et al. [28], Temple et al. [40], Johnstone and Cogan's [51] studies, spouses were cautious about reaching out to others since their partners were *serving* military personnel and access to mental health care services differed to that offered to veterans. Buchanan et al.'s [28] study highlighted stigma towards PTSD, which is echoed in the majority of narratives

gathered by Temple et al. [40]. In addition to the stigma, the narratives also highlighted the mixed messages received from the military unit. Positive messages surrounding PTSD were promoted through adverts in and around the military base, however, direct actions such as accessing services sent a:

"negative message that the marine was weak" (40. p172)

and reactions received when the serving/veteran partner tried to access services was that:

"a spouse's cry for help doesn't matter" (40. p172).

Mirrored in another study, spouses, voiced similar feelings of being:

"silenced by the institution; by having no voice" (27. p240).

A further complication to accessing help and support from mental health services and professionals was the belief that doing so, jeopardised the future career prospects for their serving/veteran partner [28, 35]. One narrative in Temple et al.'s [40] study differed, however; this was from a spouse who was a serving member of the military and whose experience varied as a result of being part of the organisation. For those spouses who did have experience of liaising with services, there were a couple of positive comments raised pertaining to service provision. However, the majority of comments made were critical of the services provided [35, 39, 50].

Theme 5: Spouse's knowledge and management of symptoms

Six of the studies highlighted spouse's knowledge around PTSD and the management of symptoms when they occurred [28, 39, 40, 44, 46, 48]. Buchanan et al.'s [28] study specifically focused on the awareness of PTSD from the spouse perspective. They undertook a critical incident survey which included the question *"How would you know if your*

spouse/partner needed treatment for PTSD?" The findings suggested that two thirds of spouses had received no formal training on PTSD and most spouses had accessed informal sources to learn about PTSD. Media resources such as movies, news broadcasts or internet were identified as primary sources. Murphy et al.'s [48] study suggested that as a result of a sense of responsibility, practical learning about what to do and say was valued by the participants. Temple et al.'s [40] study presented one spouse who differed from the other spouses; she voiced a clear understanding and underpinning knowledge of PTSD symptomology which she attributed to the in-house training she had received as a serving member herself.

Buchanan et al.'s [28] study explored further spouses' knowledge and understanding about PTSD causes, a fifth of spouses were able to identify the causes relating to their serving/veteran partners. 12% of participants declared they had little knowledge of the presenting symptoms [28]. While Murphy et al.'s [48] study didn't specifically explore an individual's knowledge, it highlighted the need to share experiences with peers in similar situations in order to gain reassurance and increase confidence in their understanding.

One of the key themes emerging from Sherman et al. [39], Temple et al. [40], Yambo et al. [44] and Thandi et al.'s [46] studies into spouses' experience of living with serving/veteran partners with PTSD, was being unprepared to handle the condition and/or deal with the complexity of the symptoms. Thandi et al.'s [46] participants

> *'described how they felt ill-equipped to perform the role as caregiver'* (p2).

Most participants in Temple et al. [40] and Yambo et al.'s [44] studies stated they had never been provided with any information about PTSD either before or after their serving/veteran partners' deployment and consequently were unable to identify whether their serving/veteran partners had PTSD. As a result, of the lack of information around PTSD, spouses begun to

doubt their relationship and own sanity and believed that they were to blame for their serving/veteran partners' destructive behaviours; and for some spouses, this belief had exceeded 10 years.

Discussion

Following completion of the review, it was apparent that there was a limited range of papers where the primary focus was the experience of the spouses of serving military personnel. As explained earlier the parameters of the search had to be widened to include spouses of veterans and the time scale was broadened to include studies undertaken post the Vietnam conflict. On reviewing the available literature, five predominant themes emerged. Interlinked themes were identified it was sometimes difficult to separate findings into one distinct theme since in most cases, they often interlinked.

The notion of caregiving burden was evident in several papers. Within most studies', caregiver burden was viewed negatively. Evident in the literature was how the spouses' level of burden increased at times when their serving/veteran partners' symptoms of PTSD were at their most severe. Likewise, when their serving/veteran partners' PTSD symptoms were minimal and they were responding well to an aspect of treatment, the level of caregiver burden felt by the spouses lessened.

As well as the perceived caregiver burden, the impact on the relationship was also apparent and emerged as another key theme. The majority of spouses were married and had been a part of military life whilst their serving/veteran partners were serving in the case of the veterans. The toll on the relationship was evident, with many spouses stating that they had - at times - felt like leaving the relationship. Many spouses blamed themselves for the problems faced in

the relationship. In some of the literature, accounts about the relationship prior to their serving/veteran partners' PTSD illness were taken from the spouses. These were reflected on with fondness and love akin to the 'honeymoon period'. Once symptoms such as emotional detachment entered the relationship, the relationship became much harder, and problems began to escalate. Many spouses felt a sense of responsibility to stay and '*stand by their man'*, and in all but one of the papers the spouses had stayed. Some of this was out of fear that their serving/veteran partner would hurt themselves or become worse. For some, it was out of loyalty, for some it was guilt about deserting them in their time of need and for some it was love. Very often it was mixture of all these reasons, meaning the relationship was no longer viewed as 'normal'.

The decision to stay had ramifications psychologically and psychosocially on the spouse. Throughout many of the studies, it was evident that they found coping with everything- family, home, work and their serving/veteran partner -stressful and anxiety provoking. This stress led to many spouses seeking treatment for their own mental health needs. Spouses described being peacekeepers to prevent triggering their serving/veteran partners' symptoms. Spouses became hyper-vigilant and hyper-attentive to their serving/veteran partners' behaviours and needs which, ultimately, placed greater strain on themselves. Spouses also described how their lives had changed socially; some felt forced to reduce their working hours, withdrawal from maintaining existing friendships and/or making new acquaintances due to caring for their serving/veteran partners'. For most, the spouse experiences held negative connotations with few studies exploring resilience, growth and/or transformation of self or the relationship.

A small number of studies explored what knowledge and insight spouses held about PTSD or mental health issues. For the majority, no formal training or guidance had been received and most of the spouses had used media such as films, internet, and campaigns to make the

connection between their serving/veteran partners' symptoms and mental health issues. Mixed messages were also highlighted; however, this was predominantly from those studies where the serving/veteran partner was still serving. For these spouses, there was an element of fear about upsetting the '*applecart*'; they were frightened that disclosing their serving/veteran partners' symptomology or seeking help would affect their serving/veteran partners' career prospects. Further, that their serving/veteran partners would be stigmatised by a diagnosis despite widespread use of flyers and advertisements stating that it was '*ok to talk'*. Spouses felt torn between the need to help their serving/veteran partner verses jeopardising their partners' career. Many spouses felt invisible and isolated with nowhere to turn for support for either their serving/veteran partners or themselves.

Barriers to mental health service provision were also recognised; for some it was the financial burden, for others accessibility and/or time and/or not even knowing where to go in the first instance. For those who had accessed mental health services, the experience was far from ideal for most; staff shortages, lack of funding, long waiting times and poor facilities meant disappointment once access was finally gained.

Limitations to current research and systematic review and narrative synthesis.

Employing a systematic search strategy ensured that the searches were transparent. Despite adopting the systematic approach, only a limited number of contemporary papers specific to the military spouses were yielded. The lack of peer reviewed studies over recent years internationally, provided the rationale for the inclusion of earlier studies. These were identified by increasing the time parameters and by executing a reference and citation search

on the papers found; again, this yielded only a few earlier papers for inclusion. From the twenty-seven studies identified, nineteen of the papers focused primarily on the spouses' experiences. However, only a few specifically pertained to the spouse experiences of serving personnel; the majority were spouses of veterans.

Owing to the cultural complexities across military organisations, studies conducted with westernised military spouses published in peer reviewed English language journals were deemed appropriate to expand this review. A major limitation is the distinct lack of studies carried out outside of the USA; only five studies identified in the UK or Australia. Whilst all the studies used were from westernised cultures, the differences in deployment terms, and healthcare systems are noteworthy. This would make the transferability of some of the findings across countries problematic.

A further limitation surrounded the specifics of the mental health issue itself. The emphasis in most of the included papers were specific to either experience of service personnel directly after deployment with PTSD, or veterans who were no longer serving with PTSD. PTSD was the single focus for many of the papers; only six papers referred to other mental health illness as well as PTSD. Many of the papers in the review made specific links to war as a precursor to the PTSD. The papers gathered made links to either post service in the Vietnam conflict or after serving OIF & OEF conflicts. It is noteworthy that the conflicts were fought 25 years apart and also in different countries and terrains. They were fought by very different means, in that Vietnam used predominantly guerrilla warfare tactics with a largely unseen enemy, whereas OIF and OEF were more conventional in the type of warfare deployed; for example, soldiers faced a modern military organisation with greater use of armoured and air support. These differences suggest that the experiences and exposure faced by those serving, could have been markedly different.

This review is focused specifically on spouses to military personnel or veterans who have served and therefore is not inclusive of the wider literature exploring those spouses' experience outside of a military context. This focus was intentional, due to the differences in mental healthcare provision for serving personnel. When considering non- military civilian couples, the majority have, and will access the same healthcare provision/organisation. This has advantages such as information sharing between professionals for the provision of holistic family care. Whereas, with most residing military couples, the serving military member accesses different care provision to their family. Accessing separate care provisions provides a potential barrier to information sharing and access to support.

It is widely acknowledged that there are a range of programmes/interventions that aim to offer support to spouses who find themselves experiencing life alongside a serving/veteran partner who has a mental health issue; for example, Spencer-Harper et al.'s [60] study of group psychoeducation support. As a result of such programmes/interventions, it is understood that grey literature exists by wider professional, charitable organisation and government publications. Only peer reviewed research was included in this review which meant that all grey literature was excluded. Two further exclusions were domestic violence and secondary PTSD. This was purposeful, as the aim of this review was to explore the experiences of spouses and not the outcome resulting from the experience. It is widely acknowledged, that the potential outcomes of living with someone with PTSD, are, a higher incidence of intimate partner violence [58] and a higher incidence of secondary PTSD for the spouse [59]. It was felt that the inclusion of such studies would detract from and overshadow the limited peer reviewed literature available.

Conclusion

The review has identified that there remains a gap in the literature, specifically, studies focusing on military spouses of serving personnel; most of the studies focused on spouses of veterans, but similarities were noted. The majority of the papers reside in the USA (n=22), with minimal papers from the UK and Australia (n=3 and n=2 respectively). While there was a near equal divide between quantitative or mixed methods and qualitative [n=11+n=2 and n=14], only nine studies used interviews as the data collection method. Thus, posing a further limitation as the majority of data collected, lacked the rich, in-depth nature required to explore spouse experience.

The findings from the review have some implications for policy, practice and research focusing on the military spouses' experiences of living alongside their serving/veteran partners during a mental health issue. Care burden from both a psychological and a physical/practical aspect was evident, as was the longevity of their partners' mental health issues. All led to long-term impact, where for most military spouses felt more like care providers than partners. The impact was also felt in the intimate relationship between military spouse and partner; difficulties in communication and emotional numbing were identified. However, dedication and commitment to the relationship was also noted. For the military spouses' themselves, there was a sense of '*loss of self*' as a direct result of caring for their partner. In addition, there was a felt sense of being invisible and/or overlooked by the mental health services; when all that was required was inclusion to gain information, so that they could better manage their partners' care. Understanding the experiences, perspectives and difficulties of military spouses whilst living alongside their serving partner/veteran during a mental health issue, will assist in better understanding of how their interactions can support or implicate their partners' recovery. Inclusion from services needs to be considered as a protective factor for both the military spouse and their serving partner.

References

1. Vos, T., et al., Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study. The Lancet. 2015; 386 (9995): 743-800.
2. Murray, C. J. L., Vos, T., Lozano, R., Naghavi, M., Flaxman, A. D., Michaud, C., et al., Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: A systematic analysis for the Global Burden of Disease Study 2010. The Lancet. 2012; 380(9859): 2197– 2223. https://doi.org/10.1016/S0140-6736(12)61689-4
3. Whiteford, H. A. et al, Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. The Lancet. 2013; 382 (9904): 1575-1586.
4. Lozano, R. et al., Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010. a systematic analysis for the global burden of disease study 2010. The Lancet. 2012; 380(9859): 2095–2128.
5. World Health Organization, Depression and other common mental disorders: Global health estimates. Geneva, Switzerland: World Health Organization; 2022.
6. Moradi, Y., Dowan, B. 7 Sepandi, M., The global prevalence of depression, suicide ideation, and attempts in the military forces: a systematic review and Meta-analysis of cross sectional studies, BMC Psychiatry. 2021; 510. https://doi.org/10.1186/s12888-021-03526-2
7. Fear N.T, Jones M, & Murphy, D., What are the consequences of deployment to Iraq and Afghanistan on the mental health of the UK armed forces? A cohort study. The Lancet. 2010; 375 (9728): 1783–1797.
8. Godfrey, K. M., Mostoufi, S., Rodgers, C., Backhaus, A., Floto, E., Pittman, J., & Afari, N. Associations of military sexual trauma, combat exposure, and number of deployments with physical and mental health indicators in Iraq and Afghanistan veterans. Psychol. Serv. 2015; 12, 366–377.

9. Belik, S. L., Stein, M. B., Asmundson, G. J., & Sareen, J. Relation between traumatic events and suicide attempts in Canadian military personnel. Can JPsychiatry. 2009; 54, 93–104.
10. Sharp, M.L. Fear, N.T. Rona, R.J. Wessely, S. Greenberg, N. Jones, N. & Goodwin, L., Stigma as a Barrier to Seeking Health Care Among Military Personnel with Mental Health Problems. Epidemiologic Review. 2015; 37: 144–162
11. Carbonell, A., & Navarro-Pérez, J. J., The care crisis in Spain: an analysis of the family care situation in mental health from a professional psychosocial perspective. Soc Work in Ment Health. 2019; 17(6): 743– 760. https://doi.org/10.1080/15332985
12. Von Kardorff, E., Soltaninejad, A., Kamali, M., & Eslami, M., Family caregiver burden in mental illnesses: The case of affective disorders and schizophrenia–a qualitative exploratory study. Nord J Psychiatry. 2016; 70(4): 248– 254.
13. Dadson, D. A., Annor, F., & Salifu, J., The burden of care: Psychosocial experiences and coping strategies among caregivers of persons with mental illness in Ghana. Issues in Ment Health Nurs. 2018; 39(11): 915– 923. https://doi.org/10.1080/01612840.2018.1496208
14. Mulud, Z. A., & McCarthy, G., Caregiver burden among caregivers of individuals with severe mental illness: Testing the moderation and mediation models of resilience. Arch of Psychiatr Nurs. 2017 31(1): 24– 30. https://doi.org/10.1016/j.apnu.2016.07.019
15. Monson, C.M., Taft, C.T. & Fredman, S.J., Military-related PTSD and intimate relationships: From description to theory driven research and intervention development. Clin Psychol Rev. 2009; 29: 707-714
16. Long, E., Living Liminal Lives: Army Partners' Spatiotemporal Experiences of Deployment. Armed Forces Soc; 2021; 1-20 https://doi.org/10.1177/0095327X21995966
17. Lowe, K, N., Adams, K.S., Browne, B.L. & Hinkle, K.T (2012) Impact of military deployment of family relationships. J Fam Stud. 2012; 18(1): 17-27
18. Snilstveit, B., Oliver, S. & Vojtkova, M., Narrative approaches to systematic review and synthesis of evidence for international development policy and practice. J Dev Effect. 2012; 4(3): 409-429.
19. Popay J, Roberts H.M, Sowden A, Petticrew M, Arai L, Rodgers M, et al. Guidance on the conduct of narrative synthesis in systematic reviews. A product from the ESRC methods

712 programme, version 1. 2006.
713 http://www.lancs.ac.uk/shm/research/nssr/research/dissemination/publications/NS_Synthesis_Gui
714 dance_v1.pdf
715 20. Jesson, J., Matheson, L. and Lacey, F., Doing Your Literature Review: Traditional and Systematic
716 Techniques. London: Sage; 2011.
717 21. Aveyard, H., Doing a Literature Review in Health and Social Care. A Practical Guide. 3rd
718 Edition, London: Open University Press; 2014.
719 22. Thomas B.H, Ciliska D, Dobbins M, Micucci S. A process for systematically reviewing the
720 literature: providing the research evidence for public health nursing interventions. Worldviews
721 Evid Based Nurs. 2004;1(3):176-84.
722 23. Kuper A, Lingard L., & Levinson W. Critically appraising qualitative research. British Medical
723 Journal. 2008; 337:687–689
724 24. Moher D, Liberati A, Tetzlaff J, Altman DG, & The PRISMA Group. Preferred Reporting Items
725 for Systematic Reviews and Meta-Analyses: The PRISMA Statement. Ann Intern Med. 2009; 151
726 (4):264–269.
727 25. Allen, E.S, Rhodes, G.K. Stanley, S.M. & Markman, H.J., Hitting home: Relationships between
728 recent deployment, posttraumatic stress symptoms, and marital functioning for Army couples. J
729 Fam Psychol. 2010; 24(3): 280-288.
730 26. Beckman, J.C, Lytle, B.L. & Feldman, M.E.,Caregiver Burden in Partners of Vietnam War
731 Veterans with Posttraumatic Stress Disorder. J Consult Clin Psychol. 1996; 64(5): 1068-1072.
732 27. Brown, V.A. Silenced Voices That Cry In the Night: The Transformative Experience of Spouses
733 of Wounded Warriors - Is it Transformative Learning? A Phenomenological Study. Doctoral
734 dissertation; The Faculty of the Graduate School of Education and Human Development of The
735 George Washington University. 2015. Available from:
736 https://www.proquest.com/docview/1673895433?pq-origsite=gscholar&fromopenview=true
737 28. Buchanan, C. Kemppainen, J. Smith, S. MacKain, S. Wilson Cox, C., Awareness of Posttraumatic
738 Stress Disorder in Veterans: A Female Spouse/Intimate Partner Perspective. Mil Med. 2011;
739 7(743): 176.

29. Campbell, S.B & Renshaw, K.D., PTSD symptoms, disclosures, and relationship distress: Explorations of mediation and associations over time. J Anxiety Disord. 2013; 27: 494-502
30. Daniels, J.A., Burden of care and social support indicated by spouses of OIF and OEF reserve veterans diagnosed with PTSD. Doctoral dissertation. Capella University. 2013. Available from: https://www.proquest.com/docview/1468440356?pq-origsite=gscholar&fromopenview=true
31. Iniedu, A.O.E., Assessing the impact oof Post Traumatic Stress Disorder (PTSD) among wives of veterans: A Phenomenological study of life changing experiences of wives of war veterans diagnosed with PTSD. Doctoral dissertation, Capella University. 2010. Available from: https://www.proquest.com/docview/597927628?pq-origsite=gscholar&fromopenview=true
32. Jordan, B.K, Marmar, C.R, Fairbank, J.A, Schlenger, W.E, Kulka, R.A, Hough, R.L. & Weiss, D.S (1992) Problems in families of male Vietnam veterans with Posttraumatic Stress Disorder. J Consult Clin Psychol. 1992; 60(6): 916-926.
33. Lyons, M. A. (1999) Living with post-traumatic stress disorder: the wives'/female partners' perspective. J Adv Nurs. 1999; 34(1): 69-77
34. Manguno-Mire, G. Sautter, F. Lyons, J. Myers, L. Perry, D. Sherman, M. Glynn, S. & Sullivan, G., Psychological Distress and Burden Among Female Partners of Combat Veterans With PTSD. J Nerv Ment Dis. 2007; 195(2): 144-151.
35. Mansfield, A.J. Schaper, K.M. Yanagida, A.M. & Rosen, C.S., One day at a time: The experiences of partners of veterans with Posttraumatic Stress Disorder. Prof Pyschol Res Pr. 2014; 45(6): 488-495.
36. Renshaw, K.D. & Caska, C.M., Relationship Distress in Partners of Combat Veterans: The Role of Partners' Perceptions of Posttraumatic Stress Symptoms. Behav Ther. 2012; 43: 416–426
37. Riggs, D.S, Byrne, C.A., Weathers, F.W. & Litz, B.T., The quality of the intimate relationships of male Vietnam veterans: Problems associated with Posttraumatic Stress Disorder. J Trauma Stress. 1998; 11(1): 87-101.
38. Sautter, F. Lyons, J.A. Manguno-Mire, G, Perry, D. Han, X. Sherman, M. Myers, L. Landis, R & Sullivan, G., Predictors of partner engagement in PTSD treatment. J Psychopathol Behav Asses. 2006; 28(2): 123-130

39. Sherman, M.D. Blevin, D. Kirchner, J Ridner, L & Jackson, T (2008) Key factors involved in engaging significant others in the treatment of Vietnam veterans with PTSD. Prof Psychol, Res Pr. 2008; 39(4): 443-450
40. Temple, J. McInnes Miller, M. Banford Witting, A & Kim, A.B., "We walk on eggshells": A phenomenological inquiry of wives' experiences of living with active-duty Marine husbands with PTSD. J Fam Soc Work. 2017; 20(2): 162-181.
41. Verbosky, S.J. & Ryan, & D.A., Female partners of Vietnam veterans: Stress by proximity. Issues Ment Health Nurs. 1988; 9: 95-104.
42. Waddell, E., Pulvirenti, M. & Lawn, S., The lived experience of caring for an Australian Military Veteran with Posttraumatic Stress Disorder. Qual Health Res. 2016; 26(12): 1603-1613
43. Woods, J. N., When a soldier returns home from Iraq and/or Afghanistan with post-traumatic stress disorder: The lived experience of the spouse. Doctoral dissertation; Capella University. 2010. Available from: https://www.proquest.com/docview/288335595?pq-origsite=gscholar&fromopenview=true
44. Yambo, T.W. Johnson, M, E. Delaney, K. R. & York, J.A., Experiences of military spouse of veterans with combat-related Posttraumatic Stress Disorder. J Nurs Scholarsh. 2016; 48(6): 543-551.
45. Calhoun, P.S., Beckham, J. C.& Bosworth, H. B., Caregiver Burden and Psychological Distress in Partners of Veterans with Chronic Posttraumatic Stress Disorder (2002) J Trauma Stress. 2002; 15(3): p205-212.
46. Thandi, G., Oram, S., Verey, A., Greenberg, N. & Fear, N.T., Informal caregiving and intimate relationships: the experiences of spouses of UK military personnel. J R Army Med Corps, 2016; 163(4): 266-272
47. Martinez, L., M. Determinants of well-Being Among Military Caregivers. University of Denver
48. Murphy, D., Palmer, E., Hill, K., Ashwick, R. & Busuttil, W., Living alongside military PTSD: a qualitative study of female partners' experience with UK veterans. J Mil, Veteran Fam Health. 2017; 3(1): 52-61

795 49. Waddell, E., Lawn, S., Roberts, L. Henderson, J., Venning, A., Redpath, P., & Sharp Godwin, T.,
796 "Their pain is our pain": The lived experience of intimate partners in Veteran recovery from
797 PTSD. J. Mil. Veteran Fam. Health. 2020; 6(2): 40-49.
798 50. Brickell, T. A., Cotner, B. A., French, L. M., Carlozzi, N. E., O'Connor, D. R., Nakase-
799 Richardson, R., & Lange, R. T., Severity of Military Traumatic Brain Injury Influences Caregiver
800 Health-Related Quality of Life. Rehabil Psychol. 2020; 65(4): 377-389.
801 51. Johnstone, H. & Cogan, N., 'He messaged me the other night and said you are my saviour': An
802 interpretative phenomenological analysis of intimate partners' roles in supporting Veteran with
803 mental health difficulties. J Mil, Veteran Fam Health. 2021; 7(2): 61-70.
804 52. Zarit, S.H., Todd, P.A. & Zarit, J.M., Subjective burden of husbands and wives as caregivers: A
805 longlitudinal study. Gerontologist. 1986; 26(3): 260-266.
806 53. Vitalinao, P.P., Young,, H.M. & Ruso, I., Burden: A review of measures used among caregivers
807 of individuals with dementia. Gerontologist. 1991; 31: 67-65.
808 54. Junttunen, K., Salminen, A.L. Tormakangas, T., Tillman, P., Leininen, K. & Nikander, R.,
809 Perceived burden among spouse, adult child and parent caregivers. J Adv Nurs. 2018; 74(10):
810 2340-2350.
811 55. Miller, R.S., Intimate Relationships. 7th Edition. New York: McGraw Hill; 2014.
812 56. Prager, K.J., Shirvani, F.K., Garcia, J.J. & Coles, M. Intimacy and Positive Psychology. In
813 Hojjat, M. & Cramer, D., Positive psychology of love. New York: Oxford University Press; 2013.
814 pp16-29.
815 57. Tedeschi, R.G., & Calhoun, L.G., The Posttraumatic growth Inventory: Measuring the positive
816 legacy of trauma. J of Trauma Stress. 1996; 9(3): 455-471.
817 58. Kwan, J., Sparrow, K., Facer-Irwin, E. Thandi, G., Fear, N.T. & MacManus, D. Prevalence of
818 intimate partner violence perpetration among military populations: A systematic review and meta
819 analysis. Aggress Violent Behav. 2020; 53: 101419.
820 59. Dekel, R., Levinstein, Y., Siegal, A., Fridkin, S. & Svetlitzky., Secondary Traumatization of
821 partners of war veterans: The role of boundary ambiguity. J Fam Psychol. 2016; 30(1): 63-71.

60. Spencer-Harper, L., Turgoose, D., & Murphy, D. ‘Exploring the Experiences of Partners of Veterans with Mental Health Difficulties Attending a Group Psychoeducation Support Intervention: A Qualitative Study’, J Fam Med. 2019; 1(2): 19-29.