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EXPLORING THE IMPACT OF PARENTAL POST TRAUMATIC STRESS DISORDER ON
MILITARY FAMILY CHILDREN: A REVIEW OF THE LITERATURE

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INTRODUCTION

Post-traumatic stress disorder (PTSD) has been increasingly discussed in the media in recent years following the homecoming of the British soldiers serving in Iraq and Afghanistan (Croft and Savion, 2013; Croft, 2014). Many are returning with debilitating conditions; between January 1st 2006 and 31st December 2014, 2,188 UK military and civilian personnel were admitted to UK field hospitals and categorised as wounded in action (Ministry of Defence, 2015).

The International Statistical Classification of Diseases and Related Health Problems (ICD-10) (2010) classifies PTSD as a disorder which emerges as a delayed or protracted response to an experience or situation that is expected to cause substantial distress to almost anyone due to the extreme threatening or catastrophic nature of the event. The disorder is characterised by a continuing sense of numbness and emotional blunting in which the sufferer detaches themselves from relationships and becomes unresponsive to surroundings. Typical features include repeated experiences of reliving the traumatic experiences in disturbing memories (flashbacks), distressing dreams or nightmares, and a state of hyper-arousal with hyper-vigilance. Anhedonia is frequent and co-morbid conditions of anxiety and depression are common, also suicidal ideation is not rare. The onset of PTSD follows the traumatic event, arising from a few weeks to months after (WHO, 2010).

An estimated 24,000 service personnel leave the British armed forces per year, 10,000 of these have served recently in action (Murrison, 2010), and a proportion of these may have been discharged due to medical conditions such as PTSD. On average, the 58 English Mental Health Trusts receive 413 veterans referred to the services annually (Murrison, 2010) however, it is unknown how many UK soldiers have a diagnosis of PTSD and require specialised mental health services (Defence Statistics Health Head, 2014). Understandably, the attention has been on the soldiers themselves and the horrific injuries, illnesses and experiences they have returned with from combat. However it must be

recognised that for every member of the British Armed forces there are many wives, husbands, sons daughters and parents affected by these experiences too.

In 2004, there were an estimated 90,000-186,000 service children (House of Commons Defence Committee, 2006), a smaller estimated range is not possible due to the lack of definition of a service child and way of collecting this data. The UK government is recognising the need to support the children of military families and so far is addressing this through support in bereavement services such as Cruse Bereavement care (2015) and the Big White Wall (2015) but these do not meet all of the psychological needs faced by service children (Fossey, 2012). These voluntary sector organisations are clearly essential (Cruse Bereavement Care, 2013), but there is limited support for those service children who may have a sense of ambiguous grief in which they have 'lost' a parent to illnesses such as PTSD as the outcome of service in the Forces (Betz and Thorngren, 2006).

This literature review aimed to explore and provide a better understanding of the experience of military children when a Forces veteran family member has PTSD and the impact of this, specifically from the child perspective. Literature pertinent to the topic was identified, critically analysed and summarised to highlight opportunities for future research and thus understanding of the child and family experience.

METHODS

Search Strategy

A systematic search strategy was utilised to identify and discover the literature relevant to the subject (Parahoo 2014). Inclusion and exclusion criteria were specified to enable a wide search of literature (See Table One). The inclusion criteria broadened to include publications up to 2001 and widened to include all countries as opposed to just the United Kingdom, United States of America and Australia as it was quickly evident on initial searching that there was a paucity of research in the area. . A brief

scope of the US Vietnam Veterans research databases revealed much that could be used to support the background and rationale for this paper but did not additional articles for the literature review.

INSERT TABLE ONE HERE

Five databases were searched using search terms that had been developed to incorporate Boolean operators and key terms (See Table Two)

A total of five appropriate research articles were found. The snowballing technique was used, aiming to find other relevant literature. This process involves checking through the references of the selected articles to establish if there are additional pertinent articles (Moule and Hek 2009). A hand search of Kings Centre for Military Health Research (KCMHR) publications located on their website was finally conducted using the simple search term of 'PTSD', although this process did not identify any further relevant literature on the topic for the purposes of this article.

INSERT TABLE TWO HERE

RESULTS

In total, the detailed search found five research articles. As indicated earlier, the literature includes studies from many countries. It is possible that this can impact on the quality of comparison between the literature due to differences in the military cultures, and the different wars that are included in the research.

Each piece of literature was appraised with reference to the purpose of the study, the research problem and question, their literature search and review, ethical issues, sample selection, research design and data collect, results and analysis of findings, and conclusions, recommendations and limitations (Moule and Hek 2011).

INSERT TABLE THREE

Thematic Analysis

Analysis of the resulting literature allowed the development of themes from the findings of each article to address the overall literature review question, acknowledging the strengths and limitations throughout. Aveyard (2014) outlines a simplified approach to thematic analysis. This approach advises the researcher to first summarise the content of each paper and then focus on the results section, re-reading and describing the findings that the researcher presents. The resulting papers were read systematically, and as the appraisal process unfolded, it was evident that themes were emerging. The themes were identified and coded throughout the papers allowing for the development and understanding of the recurring themes in the literature. This process thus identified themes that can be compared between each article under specific headings and allow synthesis of the key points being discussed (Aveyard, 2014).

THEMES

Secondary Traumatization

Secondary traumatization is summarised in Suozzi and Motta (2004) and Dinshtein, Dekel and Polliack (2011) as the transfer of trauma symptoms from one person to another. They suggest that the impact of combat trauma is not solely limited to affect the soldier but also the victims significant others such as partners, children, friends and care givers. Three articles explored the presence of secondary traumatization among children of war veterans with PTSD (Suozzi and Motta, 2004; Dinshtein, Dekel and Polliack, 2011; and McCormack and Sly, 2013).

Dinshtein, Dekel and Polliack (2011) used a quantitative approach to examine the long-term consequences of living with a father who has PTSD, as reflected in the children's general levels of emotional distress, stress responses and capacity for intimacy. Five instrumental measures were utilised including a personal data questionnaire, The Brief Symptom Inventory, The Impact of Events

Scale, Capacity for Intimacy Questionnaire and Parental Bonding Instrument. The researchers clearly explained how the participants in the study group were recruited, however the recruitment process for the control group is unclear. It was outlined that the criteria of the control group was to be a child of a war veteran who did not have a diagnoses of PTSD, and each member of the study group was matched to one participant in the control group based on characteristics such as age, gender and educational status in order to eliminate individual differences.

This study found significant differences within two factors in the Impact of Events Scale; Multivariate Analysis of Variance (MANOVA) was conducted and revealed higher levels of avoidance and intrusiveness in the study group compared to those in the control group. The children of veterans with PTSD were also found to have lower capacities for intimacy when assessed on the general intimacy scale. These findings suggest the transfer of trauma symptoms from father to child.

Dinshtein, Dekel and Polliack (2011) identified that many participants from the study group disclosed that they were happy that finally an interest had been taken about their condition and were angry that their suffering had been ignored for a long time. This suggests participants had certain expectations for the outcomes of the study and therefore, the self-report measures may have been biased, with the possibility that the participants were not so significantly affected by their father's diagnoses of PTSD.

Suozzi and Motta (2004) also propose that offspring of veterans with PTSD may suffer with secondary traumatisation. A range of quantitative measures were used to explore the relationship between intensity of Vietnam combat exposure and the transfer of trauma symptoms to children of veterans. The study used a sample of 40 Vietnam veterans obtained through an online veteran's organisation. In addition, a sample of 53 offspring of the same veterans were obtained via the same organisation.

There was a significant gender difference in the offspring with 36 being male and 17 being female. It is possible that this difference could have an impact on the results.

The adult offspring were divided into two groups; those whose fathers scored highest on the Combat Exposure (CE) scale (who also scored highest in The Mississippi Scale for Combat-related PTSD that assessed the validity of the veterans PTSD diagnoses) and those who scored lower. Offspring of high CE veterans scored significantly higher on the Minnesota Multiphasic Personality Inventory -2 PTSD Scale PK, which is an assessment used to evaluate the profiles of individuals with PTSD.

Suozzi and Motta (2004) also used a modified Stroop task to identify differences in responses to stimulus cards between offspring of low and high CE veterans. The modified Stroop task presents emotionally significant (stimulus) and non-relevant words in different ink colours and participants are to name the ink colour of the words instead of naming the written word; it is hypothesised that stimulus words take longer to name the colour than non-relevant words. Offspring of high CE veterans demonstrated a longer response time for the stimulus card consistently which showed words relating to the Vietnam War. This suggests the offspring were also affected by their fathers' combat exposure in the war however; this is not a standardised measure of secondary traumatisation. There are other possible explanations, for example, offspring of low CE veterans may have spoken less about the war with their father and therefore may show little to no response to it. Also a delayed response may not necessarily be a negative response; it may simply suggest that the words on the stimulus card have a meaning to the participant.

The third study does not use the term secondary traumatisation however; the findings suggest the concept of it. McCormack and Sly (2013) took a qualitative approach to explore the subjective experiences of being a child of a Vietnam veteran. Three adult daughters of one Vietnam veteran with a diagnosis of PTSD were the participants, they volunteered through a veteran support organisation, the inclusion criteria are unclear. Interviewing the three daughters individually collected data, they were recorded and transcribed verbatim. McCormack and Sly (2013) interviewed the three women using semi-structured interviews with open-ended questions, This provided the researchers with opportunity

to alter the structure of the interview, clarify meaning of responses and the questions could be modified if needed, therefore increasing the validity of the data (Moule and Goodman, 2009).

Analysis of the data collected from the interviews provided evidence that the dysfunctional relationship between the daughters and their father resulted in a mimicking effect of their fathers coping behaviours and responses to stressful situations; Self-medicating, heightened alertness and suppression of emotions. The findings suggest that transfer of trauma symptoms were identified in the self-reported behaviour of the participants; one participant described how she was always troubled by hyper-vigilance and difficulty sleeping, and all reported emotional bluntness which are all symptoms of PTSD (ICD-10, 2010). Another participant referred to using alcohol as a coping strategy; alcohol abuse is a common comorbidity of PTSD (Seal *et al*, 2011). All three daughters felt these characteristics were due to living with their father who has a diagnoses of PTSD.

Although a small sample, McCormack and Sly (2013) provided a rich and detailed account into the subjective experiences of the participants. The quantitative approach provides meaning to the phenomena being studied in comparison to Dinshtein, Dekel and Polliack (2011) and Suozzi and Motta (2004) of whom only identify the possible presence of secondary traumatisation but not the reasons and experiences behind it.

A limitation of all three studies (Dinshtein, Dekel and Polliack, 2011; Suozzi and Motta, 2004; and McCormack and Sly, 2013) is that none of the researchers specifically provide a definition of PTSD. McCormack and Sly (2013) and Dinshtein, Dekel and Polliack (2011) merely state that the fathers suffers with or has been treated for PTSD but does not clarify what criteria was used to diagnose. Suozzi and Motta on the other hand, use the Mississippi Scale for Combat Related PTSD to assess the validity of the diagnoses that is reported by the participants.

The research implies that children of veterans with a diagnosis of PTSD are susceptible to the transfer of trauma symptoms and may experience higher levels of avoidance, intrusiveness and other symptoms of PTSD itself. Behaviours such as hyper-vigilance and using alcohol as a coping strategy may also result from living with a veteran father who has a PTSD diagnoses. However, on such a small scale this cannot be generalised but suggests the need for a standardised tool to assess the presence of secondary traumatisation.

Impact on the Childs Mental Health

Literature suggests mainly negative effects for children that live with parents who experience mental illness including compromised emotional and mental well-being (Aldridge, 2012). All five articles included in this literature review suggest that offspring of war veterans with PTSD experience negative effects on their mental health due to their parent's diagnoses (Suoizzi and Motta, 2004; Al-Turkait and Ohaeri, 2008; Dinshtein, Dekel and Polliack, 2011; McCormack and Sly, 2013; and Boričević Maršanić *et al*, 2014).

Boričević Maršanić *et al* (2014) took a quantitative approach to explore the emotional and behavioural symptoms, parent-adolescent bonding and family functioning in clinically referred adolescent offspring of Croatian PTSD war veterans. Two samples of adolescent children were recruited from first referrals to the Outpatient Department of Psychiatric Hospital for Children and Youth, Zagreb. The samples were matched on comparable characteristics, with the main difference being born to a parent with PTSD or not.

The adolescents in both samples completed self-report questionnaires before receiving any psychosocial or pharmacological interventions.

The researchers utilised three different self-report measures; The Youth Self-Report (YSL), The Family Assessment Device and The Parental Bonding Instrument (PBI). The YSL explored behavioural

problems from the youth's perspective and was broken down into internalising symptoms, externalising symptoms, social problems, thought problems and attention problems. The Family Assessment Device assessed family functioning using a 60 item self-report questionnaire marked using a Likert scale and focused on six dimensions including problem solving and communication. The PBI (also used in the study by Dinshtein, Dekel and Polliack, 2011) explores parental practicing in two dimensions- care and control- using a 25 item self-report questionnaire, also measured by a Likert scale. Although rating scales can be considered a useful measurement tool and are easy to create (Burns and Grove, 2009), results may be unreliable if the statements are too extreme on either end of the scales and are subjective to each participant.

The analysis of the YSR scores showed that self-reported rates of somatic symptoms, anxiety, depression, thought problems, attention problems, delinquent and aggressive behaviour subscales were found to be significantly higher among the adolescent children of veterans with PTSD in comparison. These results suggest that the adolescents living with a parent with PTSD has significantly impacted on their own mental health. The use of the control group, with each participant being matched, attempt's to eliminate any other reason for the results. For example, it could be suggested that factors such as the participant's education could have an impact on the mental health well-being, but as this has been matched in this study by Boričević Maršanić *et al* (2014), and exclusion criteria had been applied, the validity of the results is increased.

Al-Turkait and Ohaeri (2008) also argue that their findings support the proposition that living with a parent with a diagnosis of PTSD will impact on the child's mental well-being. 489 offspring of Kuwaiti military men were included in the study and were split into stratified random sample of four groups; children of retired military men, children of active-in-the-army military men, children of the in-battle (involved in combat), and children of prisoners of war. They were then assessed using quantitative measures including the Family Adjustment Device, and the Child Behaviour Inventory (CBI) which

assesses child anxiety, depression and behavioural symptoms following experience of traumatic events.

From the results of the CBI it was found that 14.4% had probable clinical severity of depression and 14.9% had probable anxiety ($p = < 0.0001$, in each case) which shows a statistical significance, however, this was from the whole sample and not just the offspring of veterans with a diagnoses of PTSD. This does however suggest that simply being born to a parent in the armed forces could possibly have an effect on the child's mental health and therefore a possible increased risk when the parent is also diagnosed with PTSD. Specific to the fathers PTSD diagnoses, Al-Turkait and Ohaeri (2008) did evident that the 105 offspring whose fathers did have a diagnoses of PTSD scored significantly higher ($p = 0.01$) on the CBI depression scale in comparison to those whose fathers do not have PTSD.

Although these findings emphasise the impression that children's emotional experiences are associated with the behaviours of significant adult figures in the child's life, there are many limitations throughout the study that could decrease the reliability and validity of the results found. For example, the statistics unit of the Kuwait Ministry of Defence advised on the sample selection and the researchers did not discuss the process in which participants were recruited, this could suggest bias among the sample in order to gain desired results from the study; so although findings propose a significance on the impact of the children of PTSD veterans, this could have been more or less significant if the sample was to be less bias.

Although the findings are less generalizable due to the qualitative nature of the study and the small sample size, McCormack and Sly (2013) discuss how the three participants exhibit signs that their mental health has been effected by living with their father who has a diagnoses of PTSD. All three participants disclosed how they had feelings of shame, guilt, self-blame, that they felt 'a burden' and

'not good enough' (McCormack and Sly, 2013) which imply reduced self-esteem and self-confidence. These are considered indications of depression (ICD-10, 2010) and the participants see their father's diagnoses of PTSD as the blame for this impact on their mental health.

In contradiction to the findings from Al-Turkait and Ohaeri (2008); McCormack and Sly (2013); and Boričević Maršanić *et al* (2014), Suozzi and Motta (2004) argue that although there is evidence for the transfer of trauma symptoms, there is not significant evidence to suggest that the children's mental health status is impacted upon in terms of depressive symptomology. The findings from the Beck Depression Inventory (BDI) used by Suozzi and Motta (2004) found no significant difference between the offspring of PTSD veterans and the offspring of veterans without PTSD, in the reporting of depressive symptomatology. Also, the mean scores for both groups fell within the range which would indicate none to minimal depressive symptoms therefore refuting the findings of the previous studies. Conversely, Suozzi and Motta (2004) did find that on The State-Trait Anxiety Inventory (STAI) – which provides a measure of transient (state) and enduring (trait) feelings of tension, nervousness, worry and apprehension- offspring of high combat exposure veterans (who were more likely to have a diagnoses of PTSD) reported significantly more enduring anxiety ($p = 0.024$). The findings from this study therefore proposes that the child's mental health is impacted in terms of anxiety, however a small sample size of 53 participants in a quantitative study could suggest that these findings may not be generalizable.

Dinshtein, Dekel and Polliack (2011) highlighted similar findings from the scores of The Brief Symptom Inventory (BSI). The BSI is a self-report inventory used to assess psychological symptoms utilising a 5-point rating scale. The study group consistently scored higher in all nine subscales (e.g. depression, obsessiveness, paranoid thinking, hostility and anxiety) as well as in the global measure of distress in comparison to the control group. This evidently showed a significant difference ($p < 0.001$) in which those whose fathers had a diagnosis of PTSD exhibited greater psychiatric distress.

Overall, this theme has revealed the prevalence of mental health issues among children whose parents have a diagnoses of PTSD due to combat exposure. Due to mainly quantitative data, the theme has managed to discover these findings but unfortunately is unable to validate the reasons for the occurrence of mental health issues; there is no explanation of these causes merely, suggestions that it is due to the experience of living with a parent with PTSD.

Impact on the Childs Adult Relationships

Experiences in a child's early years have been theorised to leave a permanent imprint on their lives, including how they act in relationships formed in later life (Bowlby, 1969). Insight has been provided by Simpson, Collins, and Salvatore (2011) that some experiences can cause small but on-going effects on how people feel, think and function in romantic relationships in their adult lives. Dinshtein, Dekel and Polliack (2011) and McCormack and Sly (2013) support Bowlby's Theory and propose that the experience of living with a parent who has PTSD can have detrimental effects on the child's experience of relationships in the future.

The qualitative design of McCormack and Sly's (2013) study allowed participants to go into detail about how their experiences had affected their adult relationships and all three identified this as the biggest impact caused by their father. It was explained that their feelings of worthlessness and low self-esteem (which were blamed on the fact their father had always been hostile in expressing emotions towards them) resulted in the attraction of partners who were violent, abusive and invalidating due to the feeling that they were inadequate for anyone better. One of the participants disclosed how she desperately sought love which she had not felt from her father, and therefore endured abusive relationships. This was portrayed as a ripple effect of observing how their mother had treated their father, and then the daughters mimicking these behaviours appearing to keep the peace in a potentially unhealthy relationship.

These findings from McCormack and Sly (2013) could be criticised for having no scientific base evidencing the link between the fathers PTSD diagnoses and the impact this had on the children, nonetheless the qualitative research has allowed for an in-depth understanding of the subject using questioning and clarification in responses to collect accurate data.

Dinshtein, Dekel and Polliack (2011) affirm that there is an impact on the mental health of children whose parent has a diagnoses of PTSD caused by combat exposure. A questionnaire was used in order to assess capacity for intimacy which utilised a 6-point rating scale. ANOVA was conducted and found that children of PTSD veterans had a lower capacity for intimacy in comparison to those in the control group. The diminished ability to be intimate among the children in the study group proposes the idea that difficulties in forming interpersonal relationships in their adult life, may be transferred from their father; it seems that the posttraumatic father's inability to sustain intimate relationships, inclusive of family relationships, has been passed onto his children.

The mix of qualitative and quantitative methods within this theme brings differing perspectives to bear on the one topic in which could potentially be diminished by a focus on one method (Parahoo, 2006). Dinshtein, Dekel and Polliack (2011) have found reputable statistical data that identified the impact of paternal PTSD on military family children, and McCormack and Sly (2013) have been able to put a meaning to the statistics.

CONCLUSION

This detailed literature review has brought together the limited research available in order to provide an insight into the experiences of service children and the impact caused by a parent with PTSD. In summary, the research has highlighted the prevalence of secondary traumatisation among children of PTSD veterans and that these children are also impacted in terms of their whole mental health. These two themes entwine however it is important to acknowledge the differences between them; secondary

traumatisation refers to the specific transfer of traumatic symptoms, whereas the second theme, discusses how the child's mental health has been effected from the experiences. The review also identified the detrimental effects of parental PTSD on the child managing to form healthy adult relationships. It must be recognised that all the research included in this review is from five countries outside of the United Kingdom (UK) in which unique cultures -specifically military cultures- exist and therefore may compromise the comparison of results. Besides, an issue related closely to the field of mental health nursing has been identified with a client group which may continue to expand as wars continue therefore an importance is placed on gaining more insight into the experiences of military children whose parents have a diagnoses of PTSD.

It is apparent that that there is a paucity of research in this area of study. There is also an absence of research from the UK, it is not possible to generalise the findings from the literature review to the UK population due to the highly unique military cultures across the world. It would therefore appear from examining the literature that it would be of great benefit for UK research to take place that seeks to develop a qualitative understanding of the lived experience of military children who have a parent living with the diagnosis of PTSD.

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Table One- Inclusion and Exclusion Criteria

Inclusion	Rationale
Research published between 2004-2015	Date range was specified in order to gain the most up to date research. The original search dated back to 2005 to search within the last 10 years, however lack of articles found required to search to an earlier date.
Peer reviewed research	Research that is peer reviewed increases the credibility and rigour of the study.
Primary research	To include original research only.
English language	It would take time and expense to translate articles written in a different language and there is possibility for translation to be inaccurate.
Research based in any country	Original search was to find research based in the United Kingdom, United States of America and Australia which have a similar culture base, however had to be expanded due to limited research available.
Study Design – Quantitative, Qualitative and Mixed Methods.	To gain a wider range of research.
Articles with full text available	To be able to fully critically analyse the whole of the research article.
Exclusion	Rationale
Research that studies the perspectives of parents, other family members or friends.	For the purpose of the study to focus on the 'child perspectives'.

Table Two- Search Terms and Results

Database Searched	Search Term Used	Number of Results	Number of Studies Included in Literature Review
CINAHL (Cumulative Index of Nursing and Allied Health Literature)	(paren* OR mother OR father) AND (PTSD or "post traumatic stress disorder" OR "post-traumatic stress disorder" OR "combat stress") AND (military OR army OR armed forces) AND (child* OR infant OR adolescent OR teen*)	9	1 Dinshtein, Dekel, and Polliack (2011).
MEDLINE	(paren* OR mother OR father) AND (PTSD or "post traumatic stress disorder" OR "post-traumatic stress disorder" OR "combat stress") AND (military OR army OR armed forces) AND (child* OR infant OR adolescent OR teen*)	14	0
PsychARTICLES	(paren* OR mother OR father) AND (PTSD or "post traumatic stress disorder" OR "post-traumatic stress disorder" OR "combat stress") AND (military OR army OR armed forces) AND (child* OR infant OR adolescent OR teen*)	16	2 McCormack and Sly (2013). Suozzi and Motta (2004).
PsychARTICLES	(paren* OR mother OR father) AND (PTSD or "post traumatic stress disorder" OR "post-traumatic stress disorder" OR "combat stress") AND (military OR army OR armed forces) AND (child* OR infant OR adolescent OR teen*)	16	2 McCormack and Sly (2013). Suozzi and Motta (2004).

Psychology and Behavioural Sciences Collection	(paren* OR mother OR father) AND (PTSD or "post traumatic stress disorder" OR "post-traumatic stress disorder" OR "combat stress") AND (military OR army OR armed forces) AND (child* OR infant OR adolescent OR teen*)	15	1 Boričević Maršanić, Aukst Margetić, Jukić, Matko, V. and Grgić (2014).
PILOTS (Published International Literature on Traumatic Stress)	(paren* OR mother OR father) AND (PTSD or "post traumatic stress disorder" OR "post-traumatic stress disorder" OR "combat stress") AND (military OR army OR armed forces) AND (child* OR infant OR adolescent OR teen*)	56	1 Al-Turkait and Ohaeri (2008).

Table Three.

McCormack, L. and Sly, R. (2013) 'Distress and Growth: The Subjective "lived" Experiences of Being the Child of a Vietnam Veteran', <i>Traumatology</i> , 19(4), pp. 303-312. Year 2013 : Country Australia.			
Sample	Data Collection	Summary of Findings	Strengths and limitations
3 sisters, Aged 37, 24 and 28 years old. (Daughters of a Vietnam war veteran with PTSD) Recruited through veteran support organisations and these 3 women were from the cohort of adult children who volunteered.	Qualitative Semi structured interview schedules were developed using a funneling technique. Schedule provided to them the day before interview so they knew the topics being explored. One-on-one interviews. Interviews were recorded and transcribed verbatim, providing the data set for analysis.	Participants reflected on the negative and positive experiences of being a child of a Vietnam veteran. Overarching theme was: Making meaning of dual complex trauma. Four superordinate themes: Betrayal and neglect – Absent father; not good enough; good dad/bad dad Like father, like daughter – Self-medication; Learning to be on alert; denied the right to feel. Fragile intimate self – Weak sense of self; shame and self-blame; abusive adult relationships; burden of responsibility. Growth, forgiveness and self-care Meaning making and acceptance; forgiveness; rejecting rejection; doing it differently.	Strengths Looks deeper into feelings, behaviours and attitudes. Interviews build rapport with the participants. Provides meaning to the phenomena being studied. Limitations Subjective interpretation Authors have experiences of military therefore could cause biases. Small sample
Boričević Maršanić, V., Aukst Margetić, B., Jukić, V., Matko, V. and Grgić, V. (2014) 'Self-reported emotional and behavioural symptoms, parent-adolescent bonding and family functioning in clinically referred adolescent offspring of Croatian PTSD war veterans', <i>European Child and Adolescent Psychiatry</i> , 23(5), pp. 295-306. Year 2014 : Country Croatia			
Sample	Data Collection	Summary of Findings	Strengths and limitations
Two samples of adolescent children of Croatian war veterans were drawn from consecutive first referrals to the Outpatient Department of Psychiatric Hospital for Children and Youth, Zagreb. 122 (53.2%F) outpatient adolescent children of PTSD male veterans. (Born to a father with diagnosed PTSD secondary to combat exposure during the 1991-1995 homeland war in Croatia). For each referred child of PTSD war veteran, they included the next available adolescent of the same age, sex, education level, family income, parental employment status, ethnicity and residential area, AND born to a veteran father with war trauma but without PTSD. 244 families altogether. Exclusion criteria for adolescents – previous direct exposure to severe trauma; significant medical illness.	Quantitative Data collection was between April 2009 and September 2010. Adolescents were invited to participate after the initial assessment of all members of the MDT. Response rates 61% for PTSD veteran child and 69.7% non-PTSD veteran child. Adolescents in both samples completed questionnaires before receiving any psychosocial or psychopharmacological intervention. Measures – Youth Self-report (YSR) – evaluates competencies and behavioural problems from the youth perspective. They explored the behavioural part; the items are combined into eight syndromes: Withdrawn/depressed, somatic complaints, anxious/depressed (internalizing syndrome) Rule breaking behaviour, aggressive behaviour (externalizing syndrome) Social problems, thought problems and attention problems. The Family Assessment Device – 60 item self-report questionnaire assessing family functioning on six dimensions: problem solving, communication, roles, affective responsiveness, affective involvement and behaviour control, plus a summary scale, general functioning. (Marked by strongly agree, disagree). The Parental Bonding Instrument (PBI) – 25 item self-report questionnaire on parental rearing practices using a 4 point Likert scale. 2 dimensions of care; these dimensions combine to measure 4 bonding styles; Optimal parenting, affectionate constraint,	Child of PTSD war veterans 2 times more likely to report internalizing and externalizing problems. Increase in psychopathology among referred child of PTSD war veterans (could be due to late referral of treatment though) Increase in somatic and anxious/depressive symptoms for child of PTSD war veteran. Child of PTSD war veterans 2.74 times more likely to report somatic problems than control subjects. Higher rates of attention problems among child of PTSD war veterans. Data shows deficits in attentional functioning and mood symptoms of children of PTSD war veterans. Child of PTSD war veterans perceived overall functioning of their families as more impaired compared to Non-PTSD war veterans child. Child of PTSD war veterans reported higher levels of communication problems. Child of PTSD war veterans reported significantly lower levels of care and optimal bonding type, and higher rates of suboptimal parenting, affectionless control bonding type compared to control subjects. Associations with paternal over involvement and over-protection were found in adolescent offspring of PTSD veterans exhibiting externalizing symptoms.	Strengths Large sample size. YSR, Family assessment device and PBI covered a variety of areas. Limitations Self-report measures used rather than objective indices. Self-report makes it open to bias. The adolescent may be under or over emphasising their behaviour, family or parenting problems. Can the results be generalised? – These were participants referred to just one clinic, all for different reasons. Adolescents with milder behaviour problems may not have been referred (referral bias). Acknowledge the non-response bias, adolescents with higher stress levels or poor functioning may have been less likely to respond. Did not explore the effects of female war veterans with PTSD just male.
Al-Turkait, F. and Ohaeri, J. (2008) 'Psychopathological status, behaviour problems, and family adjustment of Kuwaiti children whose fathers were involved in the first gulf war', <i>Child and Adolescent Psychiatry and Mental Health</i> , 2(12), Article 12, Doi: 10.1186/1753- Year 2008 : Country Kuwait			
Sample	Data Collection	Summary of Findings	Strengths and limitations
489 offspring (250m, 239f, mean age 13.8 years) from 166 father-mother pairs. Stratified random sample of four groups of Kuwaiti military men; 1. The retired 2. Active-in-the-army (AIA) (involved in duties at the rear) 3. In-battle (IB) (involved in combat) 4. Prisoners-of-war (POWs)	Quantitative Participants were interviewed at home, 6 years after the war, using; Instruments used to assess parents: The clinician administered PTSD scale (for the fathers) for DSM-IV diagnoses of PTSD; The Hopkins symptom checklist to screen for anxiety and depression; internal-external locus of control; the 10-item self-esteem scale; the McMaster family assessment device; and the PTSD checklist (for the mothers) for ascertaining probable DSM-IV PTSD. Instruments used to assess children. The family adjustment device (FAD); 53 items are statements that a person could make about his/her family, rated on a 4-point Likert scale. Higher scores indicate unhealthy family. Child Behaviour Inventory (CBI); assess child anxiety, depression and behavioural symptomatology following experience of traumatic events of war. Rutter A-2 Scale – parents' version; slightly modified version of original. Consists of 31 statements concerning to child's behaviour.	Socio-demographic Characteristics The mean age of the children was 13.6 years with a range 6-33years. All children had some level of education (primary school to university). Mean age did not differ by gender. Level of education was similar by gender However, children of retired men were significantly older and had higher educational attainment. Frequency of Probable Abnormal Test Scores and Co-morbidity for the Subscales of the Three Child Outcome Instruments Found that 14.4% had probable clinical severity of depression. Found that 14.9% had probable clinical severity of anxiety. Anxiety/depression comorbidity was a common feature. However, child clinical anxiety and depression were not significantly associated with the probability of having significant family adjustment problems. Association of Fathers Combat Exposure and PTSD status with Childs Outcome Variables With regards to the fathers PTSD status, the only significant different was for the child's CBI depression. Those whose fathers had PTSD scored significantly higher than those whose fathers did not have PTSD. Relationship with Mothers PTSD status Children of mothers with PTSD had significantly higher scores for CBI anxiety, depression and aggression; Lower scores for CBI playful behaviour (less motivated); and higher scores for the Rutter subscales (abnormal behaviour); and poorer family adjustment scores. Interaction of Fathers and Mothers PTSD. Children whose mothers had PTSD or both parents had PTSD consistently tended to have higher psychopathological, abnormal behaviour and poorer family adjustment scores.	Strengths The scale in the instruments showed good internal consistency and validity. Low refusal rates. All participants completed the whole process. Assessed whole families. Face-to-face interviews. Assessment of children in the home is rare. Adequate comparison groups to provide reliable data on the interaction between PTSD status and child psychosocial outcome. Limitations Did not outline how sample was found. Did not use diagnostic instruments or specifically assess the impact of social supports. Did not assess the influence of child cognitive capacity and personality which are thought to be important determinants of psychological vulnerability after trauma.
Suozzi, J. and Motta, R. (2004) 'The Relationship Between Combat Exposure and the Transfer of Trauma-like Symptoms to Offspring of Veterans', <i>Traumatology</i> , 10(1), pp. 17-37. Year 2004 : Country United States of America			
Sample	Data Collection	Summary of Findings	Strengths and limitations
Obtained through onsite visits to chapter meetings of a local veterans organisation and also an advert in the newsletter of the same organisation. 40male Vietnam veterans and 53 of their adult offspring. 36m offspring, 17f offspring. Veteran experiencing actual combat in Vietnam war as a member of US armed forces; current diagnoses of PTSD; offspring who have lived with them and can participate; offspring over the age of 18.	Quantitative and Qualitative Self-report measures were posted to the participants with instructions (Demographic questionnaire; separate form for veteran and child, veterans looked at military service etc. also included one question that collected qualitative data but didn't give the results of this so does the data collection remain quantitative or change to mixed methods? The Mississippi Scale for Combat-related PTSD; used to assess the validity of the veterans PTSD diagnoses. The combat exposure scale; used to assess the intensity or severity of the veterans exposure to combat. Minnesota Multiphasic Personality Inventory-2 PTSD scale PK; assessment used to evaluate the profiles of individuals with PTSD. The Impact of Events Scale- Revised; Measures the strength of both trauma-related intrusive thoughts and avoidance (two key features of PTSD) 4 point Likert scale. The Beck Depression Inventory; screening instrument for major depression. The State-Trait anxiety inventory: Form Y1; provides a measure of both transient and enduring feelings of apprehension, tension, nervousness and worry; 4 point Likert scale. When completed they were to contact the researcher to arrange a time to complete the modified Stroop task and open-ended interview. Emotional Stroop Task; modification of original Stroop task. Veterans completed all. Adult offspring completed all except Mississippi Scale and The Combat Exposure Scale.	The slower naming times of the offspring of high combat exposure veterans may have been due to fear activation; fear activation is thought to occur when one's own needs for security and trust are threatened by continued exposure to a trauma victim. Higher levels of exposure to combat scored higher on trauma-related measures including PTSD. The data show the existence of a relationship between veteran combat intensity and their adult children's responses on the emotional Stroop, MMPI-2PK, and STAI-T. None of the measures revealed pathology in the offspring sample, the fact that differences occurred between the offspring's groups is noteworthy given that parental war experiences occurred 20-30 years earlier. These data suggest a differential transfer of trauma-related concerns to offspring despite the passage of two to three decades. Suggests emotional influences passed from parent to child are at a low level. Overall the present study demonstrated that intensity of combat exposure influences the expression of secondary symptoms in children of veterans	Strengths Quantitative data gives reliable data that can be replicated. Limitations The results are not really significant, could only be some of their suggestions based on their results that are relevant to the literature review. No control group to compare against If participants had difficulty in understanding the self-report measures they may have not answered them properly.
Dinshtein, Y., Dekel, R. and Pollack, M. (2011) 'Secondary Traumatization Among Adult Children of PTSD Veterans: The Role of Mother-Child Relationships', <i>Journal of Family Social Work</i> , 14(2), pp. 109-124. Year 2011 : Country Israel			
Sample	Data Collection	Summary of Findings	Strengths and Limitations

<p>Study group - 46 participants whose fathers had been actively involved in a war and had been diagnosed by the Israeli Ministry of defence with chronic PTSD as a result of combat.</p> <p>Control group – 46 participants whose fathers had been actively involved in warfare but not diagnosed with PTSD.</p> <p>Contacted participants in the study group through their fathers who had been treated for PTSD at the MOD psychiatric clinic in the central region of Israel. Those who satisfied the criteria were contacted by phone and invited for a meeting. At the meeting asked for consent to contact their children.</p> <p>Contacted 67 fathers, 54 agreed to contact their children. 63 children were contacted, 46 of whom completed and returned questionnaires.</p> <p>Control group participants were contacted directly (where from?) and asked questions to rule out that there fathers had not been disabled by war or diagnosed with emotional disabilities.</p>	<p><u>Quantitative</u></p> <p>Personal Data Questionnaire: Variables collected e.g. gender, age, marital status, military service, number of children</p> <p>The Brief Symptom Inventory: 5point scale to assess psychological symptoms in clinical and nonclinical samples. The items assess the extent of perceived distress with regard to 9 symptoms e.g. somatization, depression, anxiety, interpersonal sensitivity .The Impact of Events Scale: used to assess the emotional sequelae of the terror attacks in Israel. The objective of the questionnaire is to identify symptoms of intrusion and avoidance and describes 15 emotional potential responses to trauma. Participants asked to indicate how frequently they had experienced each of the potential responses during the previous week (4point scale).</p> <p>Capacity for Intimacy: questionnaire which participants are asked to rate their responses on a 6point scale from (statement does not describe my feelings- statement fully describes my feelings).</p> <p>Categories include mutual sensitivity, contact and intimacy seeking, trust and loyalty, ability to express anger and tolerate frustration.</p> <p>Parental Bonding Instrument: measure for assessing the quality of parent-child relationship (in this case mother-child) as perceived by children. Two dimensions assessed: care and control. 4 point scale.</p>	<p>The findings of the study support arguments regarding the increased potential for secondary traumatization among children of PTSD war veterans and indicate that they experienced greater emotional impairment than did members of the control group in the specific domains explored.</p> <p>Adult children of PTSD veterans themselves experience higher levels of distress.</p> <p>Adult children of PTSD war veterans showed higher levels of stress in the face of repeated terrorist attacks than members of the control group</p> <p>Study group exhibited greater psychiatric distress.</p> <p>Higher levels of avoidance and intrusiveness in study group. Study group had lower capacities for intimacy.</p> <p>Participants in study group who indicated their mothers as warm and more caring during childhood experienced less emotional distress and had greater capacity of intimacy than did those that indicated their mothers were not warm and caring.</p>	<p><u>Strengths</u></p> <p>Quantitative measures are replicable.</p> <p>Study group and control group were matched by age, gender, educational and marital status to avoid these becoming variables as the only variable they wanted tested was whether their fathers had PTSD or not.</p> <p>Researcher bias is avoided using questionnaires.</p> <p><u>Limitations</u></p> <p>Does not outline how they contacted the control group. Using a Likert scale may be subjective to the participant. What they believe is 'strongly agree' may be different to another participants 'strongly agree'.</p> <p>The IES asks the participants to recall something that has distressed them recently, therefore all participants are recalling upon different events.</p>
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Research Highlights

- There is a paucity of United Kingdom research into the experiences of the children of service personnel with posttraumatic stress disorder.
 - The increase in referrals to mental health services for returning service personnel suggests that there will be more children who may be affected by secondary traumatization.
 - There is need for further research with UK service personnel and their families to assist in service provision for both the adults and children involved.
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