A mixed-method exploration of the impact of PTSD in UK military veterans and their families

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Thesis declaration form

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Overview

This thesis seeks to examine the experience and impact of trauma in military veteran fathers on their children. It is a joint thesis with 'Investigating a general risk factor for intergenerational transmission of psychopathology in children in military families' (Shanmugam, 2020).

Part one, consists of a conceptual introduction which explores the literature surrounding the impact of military-related trauma and PTSD in veteran fathers on their children. Particular attention is paid to parental psychopathology and secondary traumatisation in their offspring, as well as the mechanisms by which intergenerational transmission of trauma is thought to occur. Limitations of the literature are discussed as well as recommendations for future research.

Part two, the empirical paper, describes a mixed-methods study which examines the relationship between military veteran fathers’ trauma symptomatology and their child’s functioning. In addition, the study examined whether the fathers’ reflective functioning mediated this relationship. Semi-structured interviews with a sub-set of thirteen participants sought to explore the fathers’ understanding of their trauma symptoms and the impact on their family.

Part three is a critical appraisal of the whole research process, which considers some of the conceptual and methodological challenges that arose, as well as reflections on self-reflexivity involved in the qualitative component of the project.
Impact Statement

Part one of this thesis presents a review of the literature to better understand how children of military fathers are affected by their father’s occupation, in particular by military-related trauma and PTSD. These findings suggest that paternal PTSD can significantly affect their offspring in a host of ways. It highlights the significant gaps in the literature surrounding the process of ‘secondary traumatisation’ and the intergenerational transmission of trauma from military father to child. The need for further research within the UK military context is identified which would help elucidate the specific impact on military children, and the mechanisms through which secondary traumatisation occurs in a military context. This has implications for shaping the development of policy for veterans as well as the development of responsive services to meet the needs and support all members of the military family unit.

Part two, the empirical paper, describes the use of a mixed-methods design to explore the relationship between veteran fathers’ PTSD symptoms and their child’s functioning. The findings from this study present a number of implications for clinical practice and service delivery for veterans and their families. One key finding is that growing up with a military parent who has symptoms of PTSD has negative repercussions for their children. Taken from a clinical perspective, these results invite clinicians, NHS treatment providers and third sector organisations to closely consider and hold in mind the impact of the veteran’s PTSD on the wider family system. Another key finding was that impaired paternal mentalising ability is a potential pathway through which paternal PTSD symptoms affect the severity of their child’s emotional behavioural difficulties. Clinically this has significant implications for the delivery of interventions for this group of individuals. It is suggested that interventions to target both paternal and maternal mentalising ability as a means of clinical intervention may improve the child’s emotional and behavioural outcomes.
The dissemination of these results to our collaborating organisation, The Centre for Veterans’ Health at King Edward VII’s Hospital, could contribute to further research and directly improve the experience of veteran families’ care. The results could also be disseminated nationally through scholarly journals to share the findings more broadly and influence service development for veterans in the UK. Similarly, the findings could be disseminated within the government and shared with the Office for Veterans’ Affairs, in order to influence the development of policies and treatment guidelines. Attending conferences and sharing summaries of the findings may offer another avenue to disseminate the findings to relevant government officials and third sector organisations.
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Part 1: Literature Review

What is the impact of trauma experienced by military fathers on their children?
Abstract

It is well recognised that military-related trauma can have significant effects on military personnel and veterans. There has been considerable research interest in the burden of mental health, specifically posttraumatic stress disorder (PTSD), in military personnel. However, whilst living in close proximity to individuals with PTSD can contribute to a phenomenon known as ‘secondary traumatisation’ in the offspring, the effects of military fathers’ mental health on their children and family has largely been overlooked.

In this conceptual introduction, we aim to better understand the effects of PTSD on the wellbeing of military offspring and review previous literature relevant to understanding the mechanisms of intergenerational transmission of trauma.

The impact of PTSD on veterans’ offspring are varied, manifesting in behavioural, social, psychological and emotional difficulties. Research regarding the intergenerational transmission of war-related PTSD is mixed and remains in its infancy. Outside of military populations, various mechanisms and theories have been proposed to explain the direct and indirect pathway of transmission. Given that research suggests that PTSD does not solely affect the individual, but has implications for the family unit and offspring, further research is necessary to understanding this complex interplay between the psychopathology of the veteran father, the child and their characteristics and mechanisms underlying secondary traumatisation. This has important implications if the mechanisms are amenable to early intervention and remediation.
1. Introduction

The psychological impact of military service and combat is a politically emotive topic. It is, therefore, not surprising that the wellbeing and mental health of military personnel has obtained substantial public, political and media attention. A considerable amount of research and clinical effort has concentrated on understanding the relationship between post-traumatic stress disorder (PTSD) and military service in an attempt to better understand the potential for prevention and intervention.

These issues are relevant to a great number of individuals and families given the strength of the British Armed Forces. As of April 2019, the Ministry of Defence (MOD) report that the total size of the UK Armed Forces to be in the region of 192,160 personnel. This figure includes 151,000 regular UK Forces, 2,860 Gurkas, 35,070 Volunteer Reserves and 8,170 other personnel (Ministry of Defence, 2019). By contrast, there are estimated to be approximately 2.5 million UK Armed Forces veterans in Great Britain, with approximately 15,000 individuals leaving the UK Military each year (Defence Analytical Services Agency, 2017).

Research has often focused on PTSD within the context of the military and its potential to constitute a major public health issue. Despite the relatively recent acceptance of PTSD within the realm of psychiatry (Creamer et al., 2011), the concept has existed for much longer. The Industrial Revolution saw the advent of new warfare tactics and technology which coincided with changes to the depiction of soldier’s traumatic stress reactions. The term ‘shell shock’ was coined in World War I which referred to a range of psychological and physical symptoms caused by military trauma. PTSD has also previously been known by a variety of different names over the previous century, such as ‘battle fatigue’ and ‘post-Vietnam syndrome’ (Reisman, 2016). More recently, the first Gulf War took place and the term ‘Gulf War Syndrome’ has since been used to refer to high numbers
(approximately 25%) of UK military personnel who since reported significant and unexplained symptoms of ill-health, including physical symptoms (Unwin et al., 1999). It has, therefore, been of great concern that similar difficulties would be experienced by UK military personnel following involvement in such challenging military operations in Iraq and Afghanistan (Sundin et al., 2011). These last two decades have seen the UK military exposed to intensive and sustained combat circumstances, which not only led to a greater number of casualties than were previously anticipated, but also left those who had participated in the operations with psychological difficulties and ill-health. Significant improvements to military trauma care, as well as better body armour, has meant that military personnel are surviving despite severe injuries that previously may have proved fatal (Gauntlett-Gilbert & Wilson, 2013).

While a great deal of research exists which supports the treatment efficacy for PTSD, studies have suggested that on average it takes a veteran approximately eleven years after leaving the Armed Forces to seek support (Murphy & Busuttil, 2015). Moreover, large numbers of personnel who fulfil the criteria for PTSD are not accessing any help at all. Iversen and colleagues (2010) found that only 23% of currently serving personnel with recognised mental health difficulties were in receipt of support from a medical professional. Potential obstacles to help-seeking have been proposed, which are likely to differ between veterans and actively serving personnel, including stigma, a lack of awareness about support available and practical difficulties in attending sessions (Murphy & Busuttil, 2015). The consequence of not seeking support for mental health difficulties may not only lead to a more chronic and disabling psychiatric condition but has broader implications for their surrounding social systems.

Military life has not only been demonstrated to impact its personnel in a multitude of ways, given the stressful nature of the role, but it is also reported to affect the well-being of children and spouses in military families (Lester et al., 2016).
Until recently, a great deal of research has focused on the importance of maternal psychopathology in the general population and the increased risk of their offspring developing psychopathology if, for instance, the mother has depression (Cummings & Davis, 1994). Yet a small body of more recent literature highlighted the importance of the father’s psychopathology as well as the mothers in the offspring’s development and outcomes (Goodman & Brumley, 1990; Lewis et al., 2017). Lewis and colleagues (2017) found an association between paternal depressive symptoms and the depressive symptoms of their adolescent offspring in a general population cohort study. This is important given that men represent a disproportionate share of the military.

The direct impact of experiencing psychological trauma on individuals in the military has been studied extensively over the past century (Galovski & Lyons, 2004), researchers are now increasingly attending to the health and well-being of military families (Fear et al., 2010). These issues not only affect the large numbers of actively serving and veteran personnel, who given the increased demand and intensity of recent conflicts could be at greater risk of operational stress and subsequent psychopathology, but also their family and offspring given the association between the psychopathology of fathers and their children. Taken together, there is compelling evidence that developing a better understanding of the mental health of military personnel and their families is an important issue for research, policy making and the development of effective interventions.

This review specifically aims to bring together existing knowledge on how military families are affected by military-related trauma and PTSD, and will draw attention to the absence of military-specific research, and in such cases consider the potential implications for the experience of military offspring. There are two areas of concern in relation to the pathology of military offspring which will be considered in this review: parental psychopathology, PTSD and the military, and the subsequent impact on their children including mechanisms of intergenerational
transmission. We recognise that this is by no means exhaustive, however, a comprehensive review of all factors is beyond the scope of the review. In order to adequately situate the review and provide context to these three areas of interest, a brief introduction pertaining to what is already established about the Armed Forces and PTSD will initially be provided. Factors relating to military life will be drawn upon to provide some context but this is not the specific focus of the review. It is hoped that through developing a better understanding of the impact and psychological sequelae of military-related trauma on the family, more effective treatments can be developed that will benefit the whole family system.

2. Armed Forces

2.1 Terminology

This review will not be limited to examining evidence solely from the UK Armed Forces. The UK Armed Forces refers collectively to different services including the Royal Navy, Royal Marines, Army and Royal Air Force. Given that the UK and USA both use the term ‘veteran’ to refer to slightly different concepts, we will use this term to indicate ‘ex-serving personnel’ and former members of the Armed Forces who had served for at least one day or more.

2.2 Unique characteristics of military life

Military families face a unique set of challenges, one of them being familial separation due to lengthy training exercises and deployment whereby the military parent is away from home for potentially long periods of time, which tends not to be optional or negotiable (Jarvis, 2011). Deployments are acknowledged to have an impact on the well-being and functioning of offspring in military families (Rowe et al., 2014). Given that young children are dependent on their caregivers for physical and emotional availability in order to establish and maintain a sense of security and
support their social and emotional development, deployment may be experienced as
distressing and confusing for the child (Chartrand et al., 2008). While deployment
may be challenging for the whole family unit, these difficulties may be compounded
if the military parent returning home experiences mental health difficulties,
particularly if they find it challenging to reconnect and re-establish existing
relationships (Collins, 2018). More specifically, parental deployment has been
shown to be associated with a potential vulnerability in children to developing mental
health difficulties (Cramm et al., 2019).

Typically, the operational deployments of military personnel in the UK last for
six months. In order to protect and safeguard the wellbeing of military personnel in
the UK, the ‘harmony guidelines’ were introduced by the MOD in 2005 (National
Audit Office, 2006) stipulating the maximum length of time personnel should be
deployed for. The guidelines vary by service in order to reflect the different
operational practices and requirements. For example, they state that Army
personnel should not deploy for more than 498 days in a 36-month-period, 468 days
for the Royal Air Force and 660 days for the Royal Navy and Royal Marines.

Many other unique factors specific to military life have been shown to
influence the wellbeing of military children, such as repeated relocations and
upheavals in their family life constituting disruptions to schooling and social
networks or anxiety about the threat of injury or death to their parent (Park, 2011).
These factors are by no means exhaustive. In summary, these factors as well as
other protective factors are woven into the social fabric of military life, and are
highlighted in order to provide context to this review.
3. PTSD and the Military

3.1 The relationship between mental health and Military Service

The relationship between military-related trauma and military service is not a new phenomenon. As early as 440 BC an account of the Battle of Marathon by Herodotus documented the development of ‘blindness’, caused not by physical injury, but following war-related trauma and the ‘fright of seeing a killed comrade’ on the battlefield (Crocq & Crocq, 2000).

While psychological difficulties are not unique to military and veteran populations, it is understood that military personnel are more vulnerable to developing mental health difficulties given their heightened risk of exposure to war-related psychological trauma (Hoge et al., 2004). The potential exposure to or witnessing of traumatic events is associated with the development of later psychopathology, in particular PTSD (Engelhard et al., 2007; Hoge et al., 2004).

A substantial amount of research has investigated the mental health of the UK Armed Forces, in both personnel who still serve and veterans. This is particularly important since the mental health of currently serving personnel has been shown to impact on their operational effectiveness and retention rates (Payne et al., 2013; Rona et al., 2012). Likewise, veterans experiencing mental health difficulties were at a greater risk of social exclusion (Fear et al., 2010). Most often, research in this field has explored the following mental health related outcomes: PTSD, alcohol misuse and common mental health difficulties (Harvey et al., 2012; Hoge, Auchterlonie, & Milliken, 2006; Hunt et al., 2014).

Higher prevalence rates of substance and alcohol misuse exist in veteran populations compared with the general population (Craig, Fuller & Mindell, 2015), however, there is more mixed evidence regarding the prevalence of mental health difficulties in military personnel. Woodhead and colleagues (2011) found that
veterans were not at greater risk of developing psychological difficulties than sex-matched controls in the general population using the 2007 Adult Psychiatric Morbidity Survey (APMS). The APMS is a household survey for mental health and treatment access across the UK general population. Interestingly, this was in spite of veterans reporting more negative childhood events than the general population. In contrast, a further study using the King’s Centre for Military Health Research (KCMHR) cohort, another large representative sample, found that actively serving military personnel in the UK were approximately twice as likely to endorse symptoms of common mental health difficulties on the General Health Questionnaire (GHQ), compared with the general population sample (Goodwin et al., 2015). These differences were not accounted for by demographic factors such as social class, sex, age, education and relationship status. The GHQ comprises a variety of questions relating to a range of symptoms. Interestingly, military personnel were more likely to endorse symptoms relating to low mood and internalising cognitions, as opposed to feeling under stress.

More recently, a large-scale survey sought to better understand help-seeking veterans who were already receiving support for their mental health difficulties (Murphy et al., 2019). The most commonly reported mental health difficulty was PTSD (82%), following by difficulties with anger (74%), common mental health difficulties (72%) and alcohol misuse (43%). There was also a high occurrence of comorbidity. For example, only 5% of those who fulfilled criteria for PTSD, did not also experience one of the mental health difficulties measured. Difficulties with anger and PTSD were most strongly correlated, and 72% of individuals who met criteria for PTSD also demonstrated difficulties with anger. Exploring potential moderators may help to make sense of these contradictory findings between studies. One such factor worthy of consideration is the duration and frequency of deployment and how they affect the development of parental psychopathology.
3.2 Frequency and length of deployment

Cumulative and repeated exposure to traumatic situations has been found to predict PTSD diagnoses (Briere, Agee & Dietrich, 2016). As such, research has demonstrated an association between the length of tour and psychological difficulties (Rona et al., 2007). Quite simply, as the length of the tour increases there is an increased likelihood of experiencing mental health difficulties. Those personnel deployed for thirteen months or more over a three-year period were more likely to present with psychological difficulties such as PTSD, report physical health symptoms and problems in their home life. Furthermore, the presence of severe alcohol misuse, was significantly associated with duration of deployment and increased with duration of deployment (Rona et al., 2007). Hence illustrating the importance of the harmony guidelines limiting the cumulative frequency of deployment and adhering to the recommended length of time between deployments. Interestingly, the total number of military deployments is not associated with a worsening of psychological wellbeing (Stevelink et al., 2018). Although, this lack of an association may be explained by positive adherence to the harmony guidelines which stipulate the cumulative frequency of deployment and length of time between deployments (Rona et al., 2007).

3.3 PTSD

PTSD was first conceived as a discrete diagnostic category in the Diagnostic and Statistical Manual third edition (DSM-III) in 1980. The DSM-5 characterised PTSD by four clusters of symptoms: intrusions (flashbacks and nightmares), avoidance of trauma-related stimuli, negative thoughts and feelings and changes in arousal (hypervigilance, impulsiveness, exaggerated startle response) (American Psychiatric Association, 2013). The presentation of these symptoms must be pre-existed by exposure to a traumatic event. This traumatic event could be experienced in person or by someone you are close to. The International Classification of
Diseases (ICD-11) present a more straightforward classification and highlight three symptom clusters: active avoidance, hyperarousal and re-experiencing (Barbano et al., 2019).

3.3.1 PTSD Prevalence rates

The most recent APMS from 2014 found that rates of PTSD in the general population were approximately 4.4% (Fear et al., 2016). Prior to the start of the Iraq War in 2003 a representative sample of the UK Armed Forces, found a PTSD prevalence of 2.5% (Rona et al., 2004). More recently, data from a large-scale military cohort study (2004-2006) of personnel deployed to the Iraq and Afghanistan wars, suggested that rates of probable PTSD amongst this population was 4%, measured using the National Centre for PTSD Checklist (PCL-C) (Hotopf et al., 2006). Interestingly, data from the same cohort study of both currently serving and ex-military personnel, but taken at a later time point (2014-2016) indicated that the probable prevalence for PTSD had risen to 6.2% (Stevelink et al., 2018). They found significantly higher rates of probable PTSD amongst ex-serving personnel compared with currently serving personnel. The highest rates of PTSD and other psychological difficulties were in ex-serving personnel who had previously been deployed within a combat role. Leaving the military may be further compounded by a loss of the structure and support of the military upon transition back to civilian life, for example finding alternative employment and accommodation, role transition within the family and building new support networks (Forbes et al., 2019). Another possible explanation for the increased rates in ex-personnel may be due to the fact that the personnel who are experiencing mental health difficulties are more likely to leave the Armed Forces, hence the higher rates of probable PTSD in ex-serving personnel. Others suggest that the type of combat exposure may help to further explain this finding (Fertout et al., 2011; Xue et al., 2015)
In contrast, research on US military personnel also returning from Iraq and Afghanistan found much higher rates of PTSD. Hoge and colleagues (2006) found prevalence rates of PTSD up to 20% for those returning from Iraq and 11% for those returning from Afghanistan (Hoge et al., 2004).

There are a number of hypotheses proposed to account for the different rates between US and UK prevalence rates. Firstly, there were differences in the numbers of combat personnel between the US and UK studies, with the majority of the US personnel being from direct combat roles (Hoge et al., 2004), whereas those from the UK sample were randomly selected from a variety of roles and included those in combat support and combat service support (Hotopf et al., 2006). Those in direct combat roles, as opposed to service and support roles, will have been more likely to have witnessed or been part of directly threatening or traumatic experiences, and therefore a direct combat role has been linked to being more likely to display PTSD symptoms (Hotopf et al., 2006). However, these role differences did not account for the findings of the second US study (Hoge et al., 2006) since their sample also included those in service support and support roles. There were, however, differences between the US and UK samples in terms of the demographics, the US sample was made up of younger, lower rank personnel and included more reservists. In addition, those personnel from the large military UK sample (Hotopf et al., 2006) had more military experience and prior deployments than the US sample. The also had typically been deployed to regions in Iraq where the risk was reduced and on average their deployments were shorter. These differences in prevalence rates across countries cannot be explained by how PTSD was measured and defined (Creamer & Forbes, 2004), since both the UK (Hotopf et al., 2006) and US (Hoge et al., 2004) samples measured symptoms of PTSD using the PCL-C, with a cut-off score of 50 or above to indicate PTSD. However, other methodological differences may account for these findings, for instance Hoge and colleagues (2004) reported a much higher study response rate of 98% in
comparison to 59% in the UK sample (Hotopf et al., 2006) which may have contributed to sampling bias. Overall findings are contradictory particularly between UK and US samples. Potential reasons for such discrepancy have been outlined above.

3.4 Risk Factors

The majority of military personnel will be exposed to some kind of traumatic event throughout their military career, however, it is not inevitable that they would go on to develop PTSD. While the exposure to a traumatic event is necessary for a diagnosis of PTSD, the causal pathway is complex. A combination of biopsychosocial factors and risk factors at different developmental stages will contribute to this complicated interaction (Brewin, Andrews, & Valentine, 2000).

Military-related trauma can result from a host of experiences both operational and non-operational (Forbes et al., 2019), such as direct combat, hearing accounts of traumatic experiences from fellow personnel, humanitarian deployments and peacekeeping. Examples of non-operational stressors include extensive training exercises using live ammunition designed to simulate and prepare them for operational scenarios. The aforementioned traumatic experiences are likely to interact with a host of independent risk factors and together influence the development of PTSD, such as combat role, military rank, gender, ethnicity, level of education and prior psychological difficulties (Brewin, Andrews & Valentine, 2000; Jones et al., 2013; Prigerson, Maciejewski & Rosenheck, 2001; Xue et al., 2015). Furthermore, adverse childhood events (ACEs) have also been found to be associated with the later development of military-related PTSD and severity of PTSD (Clancy et al., 2016; Forbes et al., 2019). More specifically, US veterans from the Vietnam War seeking treatment for PTSD reported greater rates of childhood physical abuse than veterans without PTSD (Bremner et al., 1993). Despite a large
number of risk factors having been identified, much remains poorly understood and requires further research.

Given such high rates of comorbidity are present in veterans with PTSD (Murphy et al., 2017), it has been suggested that treatment approaches with this population should be broader, less focused on implementing a strict PTSD protocol, and endeavour to target the range of difficulties faced by veterans (Forbes et al., 2019).

4. Offspring of parents with mental health difficulties

4.1 What are the effects of PTSD on the wellbeing of their offspring?

4.1.1 Behavioural

Adolescent offspring who have a parent with PTSD have been found to exhibit behavioural problems both at school and home (Dansby & Marinelli, 1999). Specifically, offspring whose parents have PTSD were more likely to demonstrate greater conduct problems such as aggressive behaviour, violence and hostility (Ahmadzadeh & Malekian, 2004; Barekatain et al., 2006), were at greater risk for substance abuse (Beckham et al., 1997) and were found to display increase levels of hyperactivity (Beckham et al., 1997). More recently, gender as well as age has been shown to play a role in the association between behavioural problems, such as hyperactivity and conduct problems, and paternal PTSD, with this association only significant in male offspring and those under the age of 11 years (Fear et al., 2018).

4.1.2 Psychological & Emotional Difficulties

Paternal PTSD in a veteran sample has been found to be associated with a host of elevated, clinically-relevant outcomes in their offspring, such as, separation anxiety and emotional and behavioural problems (Lester et al., 2010), internalising and externalising behaviours (Lester et al., 2010), anxiety and aggression
(Ahmadzadeh & Malekian, 2004), depression and somatising symptoms (Zalihic, Zalihic & Pivic, 2008). Moreover, paternal PTSD has also been found to predict depression in offspring (Lester et al., 2010). On the other hand, some studies have failed to find an association between veteran PTSD and offspring psychopathology (Davidson & Mellor, 2001; Westerink & Giarrantano, 1999).

4.1.3 Social

The current evidence concerning the effects of parental PTSD on their offspring’s social functioning have revealed mixed results. On one hand, children of veterans with PTSD have been found to show significantly more problems with their peers than children of veterans without PTSD (Dinshtein, Dekel & Polliack, 2011; Krešić Coric et al., 2016) and similarly veteran perceptions of their children’s functioning, including peer relationships, were poorer when they too had higher levels of PTSD symptoms (Sullivan et al., 2016).

A more precise look at paternal PTSD symptoms in particular, revealed that symptoms of avoidance and numbing were associated with their offsprings’ prosocial difficulties (Fear et al., 2018). Yet, others suggest that this group of children are at no greater risk for adverse effects to their self-worth, emotional (Westerink & Giarrantano, 1999) or social variables (Ahmadzadeh & Malekian, 2004) in comparison to several control groups (Dekel & Monson, 2010).

More specifically, the offspring of veterans with PTSD were found to demonstrate impairments in their ability to recognise all emotional facial expressions, especially the happiness and disgust, in comparison with the offspring of veterans without PTSD (Castro-Vale, Severo & Carvalho, 2019). It is quite possible that these impairments in the recognition of emotional facial expressions in others contribute to prosocial difficulties and the successful development of peer relationships.
Overall, evidence in this field relating to military personnel and their families is scarce and research findings in this area are contradictory. However, it is clear that growing up with a parent with PTSD can result in the child developing a broad range of difficulties. More research is required, given that it may offer the possibility of targeted therapeutic approaches to the prevention and treatment of PTSD (Howie, Rijal & Ressler, 2019).

5. Intergenerational Transmission of Mental Disorder

As mentioned previously, there is less evidence pertaining to the relationship between fathers, and the impact of their involvement on normal child development as well as the development of child psychopathology. The lack of research within this field is likely to be linked to beliefs about gender roles and fatherhood within families, shaped by the socio-cultural and political contexts of society which impact public and scholarly discourses of fatherhood (Featherstone, 2009). These contexts characterise how individuals behave and respond, and will have contributed to the narrative that fathers are relatively unimportant to the socio-emotional development of their children.

This narrative, however, appears to be changing, perhaps given the increased acceptability in Western societies of more active paternal involvement in childcare (Kroll et al., 2016) and it is more readily recognised that fathers too offer an important contribution to their children’s psychosocial and cognitive development (Fisher, 2017).

5.1 Intergenerational transmission of trauma

Researchers and clinicians have proposed that traumatic events have a wide and profound impact not only on those immediately exposed to the event, but also on others acquainted with them such as family, friends, colleagues or caregivers. This indirect exposure can lead to the development of symptoms in significant
others, similar to that of PTSD such as emotional numbing, hyperarousal, breathing difficulties and difficulties in trusting others (Dekel & Goldblatt, 2008).

A great deal of research was done in this field initially with Holocaust survivors and their offspring (Kellerman, 2001; Rakoff, 1966; Van Ijzendoorn, Bakermans-Kranenburg & Sagi-Schwartz, 2003), and then later with Vietnam veterans (Rosenheck & Nathan, 1985). The impact of living in close proximity to individuals who themselves are victims of trauma, can contribute to a phenomenon known as ‘secondary traumatisation’ in the offspring. This term was coined by Figley (1983) and attempts to describe the “stress deriving from helping others who are suffering or who have been traumatised” (Figley, 1999 p. 10). Secondary traumatisation is often used interchangeably with the concept of intergenerational transmission of trauma which refers to the effects of trauma on subsequent generations of children when a parental figure has survived a traumatic event (Schwerdtfeger et al., 2013).

The adverse effects of parental trauma on their offspring is well documented across a host of settings such as mothers with histories of abuse (Lyons-Ruth et al., 2005) and war veterans (Ancharoff, Munroe & Fisher, 1998; Lambert, Holzer & Hasbun, 2014). More specifically, a literature review regarding second-generation offspring of Holocaust survivors, in a clinical population, suggests that they may be more likely to develop PTSD (Kellerman, 2001). Likewise, parental PTSD has been found to be associated with increased rates of anxiety, depression and PTSD in the offspring of Holocaust survivors, in comparison with a control group of offspring and parents with no presence of PTSD symptomatology (Yehuda, Halligan & Bierer, 2001). However, not all findings are consistent and other studies have found no difference between children of traumatised parents and a control group, either for emotional distress (Souizza & Motta, 2004) or social development (Ahmadzadeh & Malekian, 2004). Nevertheless, the universality of this concept is increasingly recognised and accepted amongst clinicians, with the focus now on directing
research to better understand the mechanisms underlying this phenomenon (Yehuda & Lehrner, 2018).

5.2 Offspring Characteristics

Researchers have been interested in the association between child and parent psychopathology. Specific offspring characteristics may influence or moderate this association, either protecting or rendering them vulnerable, or indeed interact with their parent’s style of parenting (Solomon & Zerach, 2020). Research has suggested that characteristics such as offspring gender (Xue et al., 2015), gender of the parent in relation to the offspring (Leen-Feldner et al., 2013; Reeb, Conger & Wu, 2010; Russell & Saebel, 1997), birth order (Dekel & Goldblatt, 2008), age of the child (Fear et al., 2018; Parsons, Kehle, & Owen, 1990) influence the risk of intergenerational transmission of psychopathology. Furthermore, personality traits such as introversion and extroversion (Cramm et al., 2019) and neuroticism (Stein et al., 2018) may also impact the vulnerability of the child to psychological maladjustment, in the face of parental PTSD. While evidence in this field is limited, it is clear that these characteristics relate to psychological risk, adjustment and child outcome.

5.2.1 Intergenerational transmission of trauma in military families

The literature regarding intergenerational transmission of war-related PTSD is mixed and remains in its infancy (Diehle, Brooks, & Greenberg, 2017; Yehuda & Lehrner, 2018).

5.2.1.1 In which families does intergenerational transmission occur?

Research has sought to understand the mechanisms involved in intergenerational transmission of trauma and whether there are certain conditions
through which transmission of distress in military families is more likely to occur. Firstly, research has examined whether intergenerational transmission of trauma occurs in all families when the parent has participated in active combat, and then also whether there is any additional risk if the veteran father has a diagnosis of PTSD (Dekel & Goldblatt, 2008). Given methodological differences in the way studies have been conducted, it is challenging to draw any definitive conclusions. The majority of studies have recruited veteran fathers who have not only participated in active combat but also had a diagnosis of PTSD (Davidson, Smith & Kudler, 1989; Parsons, Kehle & Owen, 1990; Westerink & Giarratano, 1999).

A recent study examined the association between the veterans’ war exposure, lifetime PTSD and the psychological wellbeing of their offspring, assessed forty years after the exposure (Castro-Vale et al., 2019). No association was found between the father’s lifetime PTSD and psychological difficulties in their offspring. However, a relationship was noted between psychopathology in the veterans’ offspring and fathers’ war exposure intensity. Specifically, the greater the intensity of war exposure the veteran father was exposed to, the more likely the offspring would develop psychopathology. Similarly, Harkness (1993), previously found no significant correlation between the severity of the father’s PTSD symptomatology and the children’s behavioural difficulties.

On the contrary, when three groups of offspring were compared, whose veteran fathers were either Vietnam veterans with PTSD, without PTSD and a control comparison group of children, significant differences in family functioning were found between groups. The offspring whose fathers met criteria for PTSD also demonstrated the lowest levels of family functioning. Thus, lending support to the argument PTSD as opposed to participation in war combat placed their offspring at greater risk for intergenerational transmission (Davidson & Mellor, 2001). Likewise, O’Toole and colleagues (2016) have suggested that having a veteran father with PTSD stemming from the Vietnam War, specifically increased the risk of PTSD as
opposed to other mental health disorders in their offspring, irrespective of their gender. Given the challenge with disentangling the relationship between PTSD and intensity of combat exposure, it is therefore difficult to discern their independent contribution. It may be worthwhile for future research to explore this further.

5.3 Mechanisms of Intergenerational Transmission of Trauma

5.3.1 Biological

Researchers and clinicians alike are interested in better understanding the biological impact of having a parent with PTSD on offspring. There is a growing evidence base to suggest that parental stress, in particular PTSD, can bring about neurological changes leading to physiological stress responses in the offspring of traumatised parents (Banneyer et al., 2017; Seckl & Holmes, 2007).

5.3.1.1 Genetics

Much has been written about the genetic risk for developing PTSD, specifically the increased prevalence of PTSD amongst the offspring of those with PTSD (Solomon, Kotler & Mikulincer, 1988; Yehuda et al., 1998). A moderate heritability for PTSD has been reliably replicated through genetic twin studies, with approximately 30-40% of the variance accounted for by additive genetic factors (Sartor et al., 2011; Stein et al., 2002). This would seemingly suggest the ability for parents to transmit risk for PTSD directly to their offspring. Other more indirect pathways have been suggested such as the gene-environment correlation, which increase likelihood for offspring to be exposed to trauma by virtue of inherited personality traits, such as openness to experience or neuroticism (Jang et al., 2003). For example, certain personality traits may be more likely to increase an individuals’ risk of exposure to particular types of trauma such as interpersonal trauma, which in turn can result in PTSD (Leen-Feldner et al., 2013).
5.3.1.2 Biological Correlates

Two main biological correlates have been studied in the offspring of parents with PTSD. Firstly, alterations to the responsivity of the hypothalamic-pituitary-adrenal (HPA) axis have been noted (Yehuda, 2002). The HPA axis is one of two key pathways which connect the brain and body, the second being the autonomic nervous system, and is responsible for controlling cortisol hormones in the body and closely linked with a stress reaction. Being exposed to parental stress, such as PTSD, can lead to neurological and physiological responses to stress in their offspring (Seckl & Holmes, 2007). Furthermore, adult offspring of Holocaust survivors with PTSD were found to have reduced levels of cortisol in comparison with a control group (Yehuda, Halligan & Grossman, 2001). These findings have been replicated with adult offspring of male veterans with a history of PTSD (Yahyavi et al., 2015) and in offspring of mothers with PTSD (Danielson, Hankin & Badanes, 2015). A study by Yehuda and colleagues (2007) revealed in healthy offspring of parents with PTSD, both veterans and offspring of Holocaust survivors, reduced cortisol levels and other biological differences in the offspring was associated with maternal PTSD. Finally, and perhaps most strikingly, particular symptoms of parental PTSD of intrusions and hyperarousal were associated with offspring cortisol levels over a 24-hour period (Yehuda, Halligan & Bierer, 2002).

5.3.2 Parental emotional, psychological and cognitive state

5.3.2.1 Parenting Behaviours

A diagnosis of PTSD can significantly impact upon parenting style, given symptoms of avoidance, emotional numbing, intrusive thoughts and hyperarousal, all of which have been linked to interpersonal impairments in veteran relationships and parenting abilities (Ruscio et al., 2002). Moreover, as previously stated military-
related PTSD is highly comorbid with other mental health disorders such as depression and anxiety disorders (Koenen et al., 2003). These symptoms may leave veterans more sensitive to distressing and aversive familial interactions (Erbes et al., 2011). Research suggests that children whose fathers were experiencing numbing and withdrawl were more likely to miss out on critical opportunities to model appropriate social interactions, whilst also being exposed to negative role modelling (Ramchandani et al., 2013). A study by Gewirtz and colleagues (2010) also found that PTSD symptoms were associated with perceived parenting difficulties after one-year post deployment from Iraq. More specifically, research has demonstrated a relationship between an increased level of parental PTSD symptomatology and decreased parenting satisfaction and quality of parent-child relationship (Lauterbach et al., 2007), which indicates that parental PTSD may have the potential to affect the way they understand and behave towards their offspring.

Various explanations have sought to explain the role maladaptive parenting might play in the intergenerational transmission of trauma. Firstly, experiential avoidance which describes attempts or a desire to engage in behaviours which block out, reduce, suppress or avoid certain internal experiences. Experiential avoidance is linked to development of PTSD symptoms as well as the maintenance of these symptoms over time (Boden et al., 2012; Kashdan, Morina & Priebe, 2009). Higher experiential avoidance was associated with a reduction in positive engagement with their children (Brockman et al., 2016), thus potentially impacting on their ability to develop a meaningful relationship with their child (Galovski & Lyons, 2004).

Linked closely to this, is a body of evidence which suggests that individuals with PTSD more generally have difficulties developing and sustaining interpersonal relationships (Charuvastra & Cloitre, 2008). Family dynamics and relationships have been shown to be negatively affected by PTSD symptomatology (Gold et al., 2007). As such, research has demonstrated a positive correlation between maternal PTSD
symptoms and disengagement from their children (McFarlane, 1987) and Vietnam veterans with PTSD also reported reduced engagement with their families (Davidson & Mellor, 2001). Symptoms of PTSD such as emotional numbing and withdrawal or a flattened affect may decrease the parent’s ability to participate in and take pleasure from interactions with their children, thereby affecting the quality of the interactions and relationship (Ruscio et al., 2002). This in turn may perpetuate a vicious cycle of frustration, loneliness and further withdrawal from the family unit (Galovski & Lyons, 2004). Taken together, parental disengagement is another possible pathway through which offspring are negatively impacted by their parent’s PTSD symptomatology.

In addition to experiential avoidance, ‘hostile’ parenting characterised by ‘over-reactive’ disciplinary strategies, have been found to be used more frequently amongst mothers with PTSD in response to their children (Chemtob & Carlson, 2004). In a similar vein, Leen-Felder and colleagues (2011) found in a large representative sample of parents with PTSD that they were significantly more likely to sanction the use of a various hostile parenting strategies, such as choking or burning, despite controlling for confounding demographic and clinical factors. These findings are consistent with the wider literature, which reports on the increased presence of violence, anger and abusive outbursts in families where one parent has PTSD (Monson, Taft & Fredman, 2009). In sum, ‘hostile’ parenting may lead to increased vulnerability amongst offspring of parents with PTSD and form a potential pathway through which secondary traumatisation occurs.

If we are to fully understand the mechanisms through which secondary traumatisation occurs then it has been suggested that we must look at the wider context. The process of intergenerational transmission is thought to be moderated by offspring themselves (O’Connor, 2002; Silverman et al., 2009). Certain parenting practices may be elicited by the characteristics of their offspring such as age, sex, temperament, and this process is known as “child-driven effects” (Jaffee et al.,
For example, particular child behaviours may increase a parent’s psychological stress thus causing them to rely on harsher parenting strategies (Ansari & Cosnoe, 2015).

The main body of literature in this field has explored the role of maternal PTSD symptoms on parenting their offspring and the potential transmission pathway this may represent. Nevertheless, maternal PTSD symptoms are more frequently and robustly associated with negative offspring outcomes, compared with paternal PTSD symptoms. There are various explanations for this finding, however, we must acknowledge that further studies are required to examine the role that gender plays in mediating or moderating the impact of maladaptive parenting on offspring outcomes.

5.3.2.2 Cognitions

More generally, outside the arena of parental trauma, the study of the transmission of psychopathology has been fruitful. Cognitive distortions are noted to play a role in the intergenerational transmission of psychopathology (Goodman & Gotlib, 1999). Similarly, two theorised pathways of transmission have been proposed (Schwartz, Dohrenwend & Levav, 1994). Firstly, the direct and specific pathway of transmission suggests that exposure to parental psychopathology results in the development of maladaptive thinking in their offspring. For example, a child exposed to a parent who is hypervigilant might develop an understanding that the world is a dangerous place which might, therefore, put the child at a greater risk for developing anxiety. This pathway suggests that the child’s mood and behaviour symptoms are a function of being exposed to parental trauma psychopathology. Whereas, the indirect pathway of transmission proposes that the children develop maladaptive thinking and behavioural symptoms as a consequence of their dysfunctional relationship with their parents, as opposed to simply by exposure to their parents’ trauma psychology. Subsequent research literature has suggested that the quality of
the parent-child relationship may indeed mediate the relationship between the mothers’ psychopathology and the child’s symptoms (Easterbrooks, Bureau & Lyons-Ruth, 2012; Kim & Cicchetti, 2004).

More recently, further support was found for the aforementioned direct pathway in a study by Babcock, Fenerci and DePrince (2018) which explored cognitive mechanisms involved in the intergenerational transmission of trauma. This study found that maternal trauma-related cognitions such as post-trauma appraisals and disorganised memory, in a sample of mothers who had experienced childhood maltreatment, were significantly linked to their toddlers’ internalising symptoms. These findings support the hypothesis that maternal cognitions and memory impacted by trauma are potential mechanisms for the transmission of trauma. It stands to reason that these pathways would also exist within military families and could constitute a possible mechanism of transmission. Nevertheless, further research is needed to confirm this.

5.3.3 Parental & Offspring Communication

Previous studies have hypothesised that trauma is transmitted through the following four pathways: overdisclosure, silence, reenactment and identification (Ancharoff, Munroe & Fisher, 1998; Banneyer et al., 2017; Danieli, 1998).

5.3.3.1 Overdisclosure

Overdisclosure by the parent with PTSD, meaning that they disclose specific details of the trauma with their child, can leave the child feeling overwhelmed given their developmental capacity is not sufficient to cope. Ancharoff and colleagues (1998) proposed that a potential reason for overdisclosure stems from the parent not having fully integrated their experiences and therefore struggling to decide what to disclose based on the child’s level of understanding and affect. The timing and manner of disclosure of war-related trauma by parents is also felt to be of
importance within military families, and has been suggested to affect the child’s ability to play creatively (Measham & Rousseau, 2010).

5.3.3.2 Silence

The ‘conspiracy of silence’ has been documented amongst families of war veterans with PTSD (Danieli, 1998). Silence may be one way in which the parent may cope with their symptoms of trauma, by compartmentalising and not talking about it, in turn they may withdraw from their family, and model avoidance of traumatic event cues. In these cases, families may try to accommodate this change in family dynamics, and manage this withdrawal and silence by avoiding talking about the deployment or engaging in situations, behaviours or stimuli linked to the traumatic event. Notably veterans may indeed wish to talk to their children about their experiences of PTSD yet experience barriers to doing so such as emotions such as shame or concerns about the consequence of this disclosure on their offspring (Sherman et al., 2015).

It has been suggested that children are aware of these changes to parental communication, yet are not able to process the unspoken trauma, hence they too develop symptoms in line with PTSD (Ancharoff, Munroe & Fisher, 1998; Danieli, 1998). Moreover, parents modelling avoidance of the traumatic event stimuli may directly influence offspring avoidance behaviours (Koenen, Nugent & Amstadter, 2008), through the exclusion of discourse about such stimuli related to the traumatic incident.

5.3.3.3 Reenactment

Another potential mechanism relates to the veteran’s response to trauma-related triggers, such as becoming startled at hearing a siren, in the presence of their child. Thus leading the child to experience an emotional reaction, such as fear, the same way the parent did when they experienced the original traumatic event.
These patterns of behaviour may promote the child to develop beliefs that the world or others are unsafe. Furthermore, the child may develop concerns about the parent’s ability to provide reliable care. These beliefs may also affect the child’s behaviour in other settings such as displaying defiant behaviour in the classroom, in line with the parent’s view of authority figures as untrustworthy. In summary, the child’s interactions with the parent, whose worldview has changed as a result of war-related experiences, may mirror changes in the child’s worldview (Ancharoff, Munroe & Fisher, 1998).

5.3.3.4 Identification

The child may seek emotional warmth and closeness with the traumatised parent, in order to support them with their symptoms of PTSD or connect with them, hence the child tries to identify with the traumatic experience that their parent experienced. In doing so, the child might acquire some of the parents’ feelings related to the traumatic incident as if it were their own (Ancharoff, Munroe & Fisher, 1998).

5.3.4 Attachment Theory

Another possible mechanism that has been described to explain the intergenerational transmission of parental trauma is the result of attachment mechanisms (Gorman, Fitzgerald & Blow, 2010). Some studies have even gone as far as to indicate attachment patterns to be the chief mode of secondary traumatisation (Berthelot et al., 2015; Salberg, 2015). A meta-analysis suggested that adult attachment style was associated with PTSD symptomatology, and this association held true across a host of different types of traumatic events (Woodhouse, Ayers & Field, 2015). On the other hand, some literature suggests that PTSD symptoms, such as intrusive thoughts, could even act to protect the child
against developing an insecure attachment as they might help the parent to stay in touch with reality as opposed to dissociating (Hughes et al., 2006).

Nevertheless, the aforementioned research in this field has neglected to examine this within a military population. Interestingly one of the few studies in this field looking at adult offspring of male war veterans, did not find an association between veterans’ lifetime PTSD status and war exposure with their offspring’s adult attachment (Castro-Vale et al., 2019). There are many explanations for this finding, perhaps one of the most convincing explains the importance of sensitive and responsive parenting from the maternal caregiver which in essence buffers the child’s stress response and protects them from developing negative emotional and cognitive responses.

5.3.5 Reflective Functioning

Bound up with attachment theory is the concept of mentalisation (Fonagy & Target, 1998), and ‘reflective functioning’ (RF) which is the operationalised construct. RF is purported to be a basic component of psychic structure and refers to the psychological processes underlying our ability to mentalise i.e. perceive and understand oneself and others in terms of intentional mental states (Fonagy & Target, 1997). This uniquely human capacity is necessary to negotiate and thrive within the social world. Those individuals that are better able to understand their own and others’ emotions, intentions and actions i.e. high RF ability, will in turn be better equipped to regulate affect (Fonagy & Bateman, 2006).

Parental RF (PRF) refers to a parent’s capacity to understand and reflect upon both their own mental state and their child’s mental state (i.e. thoughts, feelings, desires, belief and intentions), and then make interpretations of their child’s behaviour whilst holding in mind how this might relate to their own mental state (Fonagy et al., 2002). This capacity to respond sensitively and aptly to the child’s needs, despite heightened affect, occurs through a process of reflecting on their
own emotional experience and as well as hypothesising what might be going on internally for their child (Fonagy et al., 1991). Consequently, higher levels of RF are associated with the development of positive interpersonal relationships between parents and their children (Slade, 2006).

Crucially, PRF has been proposed to act as a mediating factor in the intergenerational transmission of psychopathology. Research has suggested that mothers who are able to mentalise their own prior traumatic experiences, are better able to make sense of and cope when trauma-related affects are triggered. Thus, the potential impact on their children is mediated as they are less likely to act in ways which could be harmful and inappropriate (Ensink et al., 2014). High levels of maternal RF have been found to be associated with lower levels of emotional and behavioural difficulties in the child (Suardi et al., 2018).

There is a dearth of evidence relating to PRF, in particular that of military personnel and is worthy of further investigation.

5.3.6 Other Relevant Factors

5.3.6.1 Characteristics of Trauma & Environmental Factors

Parental PTSD symptomatology and the characteristics of the trauma may impact on the mechanisms of the transmission. For instance, PTSD severity, age of the offspring at the time of PTSD onset, chronicity of the PTSD should all be considered relevant factors in the mechanism of transmission (Leen-Felder et al., 2013). Likewise, the length of time since the parent encountered the traumatic event is another pertinent factor to consider; some parents be more recently traumatised as opposed to those who experienced trauma prior to the birth of their child. In which case there may be mechanisms of secondary traumatisation which operate differently.

Taken together, it is conceivable that different layers of psychobiological vulnerability uniquely relate and interact with the timing of the traumatisation. For
instance, in parents who are more recently traumatised this may more significantly impact on their parenting behaviours and communication, whereas in parents who were traumatised prior to the birth of their offspring or their early life may influence their offspring in terms of neurobiological changes and epigenetic mechanisms (Charuvastra & Cloitre, 2008).

Equally the type of traumatic event may impact on likelihood of secondary traumatisation occurring, although relatively little is understood about this in comparison. Interpersonal trauma such as military-related trauma is understood to lead to increased rates of PTSD in comparison with a non-interpersonal traumatic incident such as a natural disaster (Resnick et al., 1993). Even so the presence of PTSD is more imperative than the type of traumatic event (Galovski & Lyons, 2004).

A heightened level of general environmental stress, linked to having a parent with PTSD, has been documented as another potential contributing factor in offspring vulnerability (Leen-Feldner et al., 2013). Indeed, offspring of mothers with PTSD report greater levels of general environmental stress compared with offspring without maternal PTSD (Brand et al., 2011). PTSD is also associated with an increased risk of other life events related to familial structure, such as parental divorce (Kessler, Walters & Forthofer, 1998) and intimate partner violence in veteran populations (Gold et al., 2007; Monson, Taft & Fredman, 2009) which may contribute to an elevation in offspring stress. Other contextual factors such as the family experiencing economic adversity alongside the parent having PTSD (Kessler, 2000) may act directly or indirectly to impact on offspring outcomes. This is relevant to military families given that we know that military parents can find it challenging to reintegrate back into their civilian and life, and re-establish family relationships (Lester & Flake, 2013), which can be experienced as stress-inducing for their children (Creech, Hardley & Borsari, 2014).
6. Discussion & conclusions

Understanding the implications of military fathers developing military-related PTSD and then returning to live with their wider family system is of utmost importance. This is particularly pertinent since research suggests that PTSD does not solely affect the individual, but also has systemic and relational implications for family functioning, such as the psychological functioning and well-being of the spouse and children, family cohesion and conflict, parenting style, spousal relationship (Bommarito et al., 2017; De Burgh et al., 2011; Doncaster et al., 2018; Galovski & Lyons, 2004; Monson, Taft & Fredman, 2009; Murphy et al., 2017; Ray & Vanstone, 2009).

A complex interplay exists between the specific psychopathology of the veteran father, the child and their characteristics and their potential interaction with situational factors related to military life, and mechanisms of intergenerational transmission impacting on parenting and child characteristics. The current evidence base pertaining to the role of military-related trauma and PTSD on their children is mixed and inconclusive (Fisher, 2016). While a great deal of the studies have suggested that offspring are affected by their father’s trauma in a multitude of different ways, it is clear that the intergenerational transmission of military-related trauma requires a more nuanced understanding, viewing it as a cause and effect relationship is too simplistic. Perhaps this is because PTSD is a heterogeneous disorder, thus it follows that this heterogeneity will influence the subsequent generation to a greater extent, given that parental psychopathology is only one factor out of a possible myriad of other influences such as the potentially protective maternal influence (Davidson & Mellor, 2001). It should also not be forgotten that military involvement and combat trauma do not take place in a vacuum, and are in fact inextricably linked to the social and cultural context in which they take place (Rosseau & Drapeau, 1998). This will no doubt influence what feels ‘acceptable’ for
military personnel to share in terms of mental health distress, and on them feeling able to seek support, subsequently influencing the military family’s experience of distress.

Further development of the evidence base is necessary as much of this research has been conducted among clinical populations of military parents who had been receiving support for their mental health. Therefore, we cannot simply assume that these findings regarding secondary traumatisation would hold true for those military personnel who have not sought treatment (Dekel & Goldblatt, 2008). Furthermore, given that PTSD commonly co-occurs with other mental health disorders such as depression (Walter et al., 2018), it is surprising that limited research exists surrounding the impact of this on military families.

In order to gain a more of a sophisticated understanding of how trauma is experienced within military families, it is crucial not only to understand the relationship between parental PTSD and offspring outcomes from multiple perspectives, but also to make a concerted effort to understand the mechanisms underlying secondary traumatisation. This is particularly important if mechanisms identified are amenable to early intervention and remediation. Furthermore, a great deal of the research relating to the mechanisms of intergenerational transmission of trauma has not been conducted using military samples. Much of this research has stemmed from anecdotal report and literature on Holocaust survivors’ offspring, which was interested in whether and how clinical problems in the offspring of Holocaust survivors manifested (Rakoff, 1966), as well as the offspring of ex-prisoners of war (Zerach et al., 2016). While certain inferences can be drawn from the general population and that of Holocaust survivors, it is not possible to draw unequivocal conclusions about the operation of these mechanisms in military families.

Moreover, the evidence base is fraught with a host of methodological issues and complexities. Considerable variation exists in relation to study design, in terms
of study population, methods employed to determine PTSD and offspring outcome and the consideration of potential confounding variables, all of which make it difficult to systematically compare findings as it naturally produces diverse results. For instance, some studies have examined the impact of military-trauma on young children (Bosquet Enlow et al., 2011), others have looked at subsequent effects in adults (Shriran et al., 2011) and others have used parent-reported outcomes of their offspring (Leen-Feldner et al., 2011).

Furthermore, the majority of the research within the field utilises a cross-sectional, correlational design, thus hampering the possibility of drawing causal inferences about the specific role of mechanisms of trauma transmission within military families. What is clear is that, given the complexity of the interaction between parental psychopathology, individual child differences and specific mechanisms of intergenerational transmission within a military population, there are a number of qualitative and quantitative methodologies that might be helpful in advancing our understanding of this relationship. This will be key to informing policy making, allocation of resources and interventions offered to military families.
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Part 2: Empirical Paper

A mixed-method exploration of the impact of PTSD in UK military veterans and their families
Abstract

**Aims:** This mixed-methods study aimed to explore the relationship between veteran fathers’ PTSD symptoms and their child’s functioning.

**Method:** Quantitative self-report data were collected from 112 military veteran fathers as part of a cross-sectional online survey, covering a range of symptoms and child outcomes were assessed (based on their father’s report). Semi-structured interviews were then conducted with a sub-sample of 13 veteran fathers. Quantitative data was analysed using multiple regression and mediation analyses. Qualitative data was analysed using thematic analysis.

**Results:** Both the veteran fathers’ PTSD symptoms and their reflective functioning (RF), *(uncertainty about mental states subscale)*, were found to independently predict their child’s functioning. This association between the fathers’ PTSD symptoms and child functioning was partially mediated by parental RF (PRF). Qualitative results suggest that veterans encounter a significant number of life changes through military family membership and reintegrating back into civilian and family life. These changes affect not only them but also those around them, making it difficult to navigate complex interpersonal relationships and in turn, this may affect their sense of identity and ultimately impact upon their children. Nevertheless, moving on from the military was also associated with personal growth for them and their family.

**Conclusions:** The findings here suggest that impaired paternal mentalising ability is a potential pathway through which PTSD symptoms affect the severity of their child’s emotional and behavioural difficulties. Qualitative results provide an added perspective to these quantitative findings and add value to better understanding the risk of intergenerational transmission of psychopathology. Clinical and research implications are also discussed.
1. Introduction

The number of children and adolescents affected by mental health disorders worldwide has been estimated to be in the region of 13% (Polanczyk et al., 2015). The precise mechanisms underlying the development of mental health difficulties in children have received a great deal of interest from both researchers and clinicians. In particular, a complex interplay exists between the role that parents play in the development of their children and the myriad of mechanisms that shape a child’s development such as shared genetic makeup, parenting strategies, parents’ own psychopathology and personality type and the choices they make surrounding their child’s upbringing and environment (Barker, Iles & Ramchandani, 2017).

Childhood and adolescence are understood to constitute particularly important and sensitive developmental stages (Wenar & Kerig, 2006) which can influence functioning in adulthood. More specifically, growing up in a stressful, inconsistent and unpredictable family environment can negatively impact on child outcomes (Cummings & Davies, 2010).

1.1 The Military

One such milieu is an upbringing within a military family (Galovski & Lyons, 2004), particularly given that a military career is one which ‘one person joins but the whole family serves’ (Park, 2011). There are a unique set of stressors and challenges for children growing up within military families, such as sustained periods of absence from caregivers on deployment which can be linked to changes in family roles and identity (Jain, Stevelink & Fear, 2017; White et al., 2011) and anxiety about a parent’s safety whilst on deployment (Park, 2011). Furthermore, this can impact on the physical and psychological wellbeing of the spouse who temporarily becomes the sole caregiver (Mansfield et al., 2011).
1.2 Post-traumatic stress disorder (PTSD) in military populations

There has been a rapid expansion within the field of military psychiatry due to increased recognition of the physiological and psychological manifestations of distress within military personnel (Jones & Wessely, 2005). Particular attention has been paid to the relationship between having served in the Armed Forces and the development of PTSD. In brief, PTSD is characterised by avoidance, changes in cognition and affect, intrusive re-experiencing symptoms and hyperarousal as a result of a traumatic event. There are a host of risk factors which explain why combat personnel may be particularly at risk of developing PTSD. Perhaps the most obvious, given the nature of their role, is that they are more likely to encounter traumatic situations which place them at risk of death or serious injury. Specifically, with regards to armed combat, discharging a weapon is also reported to increase the risk of developing PTSD (Xue et al., 2015).

PTSD can significantly impact on an individual’s behaviour and their psychological and social functioning. A pressing question, therefore, relates to how the presence of PTSD in military personnel affects the parent-child relationship, parenting style and subsequent child outcomes. Studies suggest that PTSD symptoms can compromise a veteran’s parenting ability (Davidson & Mellor, 2001). Symptoms associated with PTSD, such as anger, disturbances to memory, attention and affect, are proposed to contribute to impaired parenting behaviours such as being hostile, reserved and irritable. In addition, emerging evidence suggests that veteran paternal PTSD is associated with reduced levels of parenting satisfaction (Cohen, Zerach & Solomon, 2011; Jordan et al., 1992; Samper et al., 2004), reduced self-rated parental functioning such as the use of violence and decreased ability to meet the physical and emotional needs (Solomon et al., 2011) and more

1 For further information on the diagnostic categorisation of PTSD according to DSM-5 and ICD-11 see part 1 section 3.3
controlling parenting style as rated by their adolescent offspring (Vukovic et al., 2015).

Research, although scarce, has sought to understand the relationship between specific posttraumatic symptom clusters and parental functioning. Most literature has investigated the relationship between the avoidance cluster of symptoms and family functioning (Cook et al., 2004; Evans et al., 2003). In particular, emotional numbing has been found to contribute to difficulties in parent-child relationships, even after accounting for symptom severity (Clark & Phares, 2004; Cook et al., 2004). These findings have been replicated in military families and emotional numbing has been found to significantly interfere in parenting of older military children (Ruscio et al., 2002). This is best understood in the context of emotional sharing which increases closeness and intimacy, therefore, a lack of sharing may lead to feelings of detachment and isolation and undermine the parent-child bond (Frederikson, Chamberlain & Long, 1996). Moreover, PTSD is a highly comorbid condition and often associated with depressive symptoms and substance misuse which are also known to negatively impact child wellbeing and development (Riley et al., 2009). Further research is required to disentangle the impact of these co-occurring disorders, as well as parental satisfaction from parental distress to provide a more reliable understanding of the impact of PTSD.

Most studies, however, have tended to rely upon cross-sectional designs and so are unable to determine any causal influence of parental PTSD on parenting domains. As such, the field would benefit from the use of longitudinal methodology. Research has disproportionately looked at the impact of maternal PTSD and the influence of fathers warrants further investigation.

1.3 The Military, fathers and child outcomes

Approximately one quarter of UK military personnel are suggested to have at least one child under the age of 18 years (Diehle & Greenberg, 2015), the majority
of these are fathers, since only approximately 10 per cent of the UK military is comprised of female personnel.

Research has demonstrated the importance of fathers in their child’s social, emotional and cognitive development (Fisher, 2017). Just as positive paternal interactions are associated with the positive wellbeing of the child, negative interactions and behaviours linked to paternal mental health can impact on subsequent child development and psychopathology. A large cohort study in the general population found that postnatal depression in fathers was associated with later child psychopathology at aged seven years, even after controlling for maternal postnatal depression and fathers’ educational level (Ramchandani et al., 2008), as well as a higher risk of internalising and externalising problems (Kane & Garber, 2009). This is especially important to consider when developing interventions to improve child and adolescent mental health as it demonstrates the importance of targeting both parents, regardless of their sex. Moreover, it has also been proposed that paternal involvement, in terms of control and warmth, can moderate the impact of maternal depression on a child’s later development of psychopathology (Mezulis, Hyde & Clark, 2004). Others take this one step further and suggest that paternal mental health may act as a protective factor in the relationship between a mother’s and children’s depressive symptoms, whereby when the fathers reported fewer depressive symptoms no relationship between mother’s and children’s depressive symptoms were detected (Gere et al., 2013). They suggest that paternal mental health not only has an impact on the fathers themselves but also on the subsequent development of the children and in some cases can moderate the relationship between a mother and their offspring’s mental health.

In light of evidence that suggests fathers play a key role in the development of their children in the general population, there is a need to investigate this within a military population to understand how such mechanisms might affect military
families particularly given there is a dearth of research literature pertaining to fatherhood within the military.

1.4 How does military-related PTSD affect veteran fathers’ offspring?

A review by Dekel and Goldblatt (2008) explored how distress in the offspring of veteran fathers with a diagnosis of PTSD manifested in their offspring. They suggested that it was more appropriate to consider the broader expression of distress in the offspring as opposed to assuming that the children’s distress would manifest similarly to their fathers i.e. PTSD symptomatology. Three categories were proposed: psychological distress, family functioning and self-esteem. Firstly, evidence examining whether offspring developed mental health symptomatology, such as anxiety, depression, behavioural difficulties or PTSD, was mixed. Some studies suggested that children of fathers with PTSD demonstrated increased behavioural and emotional problems (Jacobsen, Sweeney & Racusin, 1993; Qouta, Punamaki & Sarraj, 2005), more academic difficulties and eating disorders (Davidson, Smith & Kudler, 1989) and more anxiety and depression (Dansby & Marinelli, 1999; Mai, 2010; Scheeringa & Zeanah, 2008) than a control group whose fathers did not have PTSD. On the other hand, further research has found no differences in social development (Ahmadzadeh & Malekian, 2004) or psychological distress (Davidson & Mellor, 2001) between offspring of veterans and control groups. Secondly, family functioning has been thought to be affected by differences in parenting by veterans through more controlling and overinvolved relationships with their offspring (Harkness, 1993), specific difficulties in familial interactions (Monson, Fredman & Dekel, 2009) and overall family functioning (Dekel & Monson, 2010). Finally, there has not been found to be a significant difference in self-esteem between offspring of veterans with PTSD and a control sample (Davidson & Mellor, 2001).
Few studies have examined the long-term impact of growing up with a father who had military-related PTSD. A study by Dishtein and colleagues (2011) found that adult children of veterans with PTSD demonstrated a reduced capacity for intimacy and increased levels of psychological distress, compared with a control group whose fathers had been actively involved in warfare but were not diagnosed with PTSD. These findings support previous studies which also found that second-generation Holocaust survivors had a reduced capacity for intimacy (Solomon, 2007), suggesting that children of PTSD veterans might experience difficulties in developing and maintaining stable interpersonal relationships (Harkness, 1993; Op Den Velde, 1998). Moreover, growing with a father with PTSD and whose behaviour might be characterised as unpredictable and confusing (Frueh et al., 1997) and uses coping mechanisms such as emotional suppression, avoidance, suspicion, influences how children cope with emotionally demanding situations in later life (Dishtein, Dekle & Polliack, 2011).

1.5 Secondary Traumatisation

Understanding the process by which the transmission of psychopathological symptoms from one generation to the next in military families is of utmost importance, given the ramifications for the child (Rosenheck & Nathan, 1985). This ‘ripple effect’ was termed ‘intergenerational transmission’ by Figley (1995)²

1.5.1 PTSD, mentalising and child outcomes

Intergenerational transmission of PTSD from one generation to the next is well documented (Davidson & Mellor, 2001; Scheeringa & Zeanah, 2008). One account that might help further understand the mechanisms underlying

² An in-depth account of the potential mechanisms through which transmission might occur can be found in part 1 section 5.3
intergenerational transmission among children of veteran fathers with PTSD is the theory of mentalisation. As discussed in chapter one, mentalisation or ‘reflective functioning’ (RF) refers to the quintessential human capacity “to think about mental states separate from, yet potentially causing actions” (Fonagy, 2004, p.28). In relation to parenting, parental reflective functioning (PRF) refers to the parent’s capacity to make sense of their child’s behaviour in relation to their child’s mental state, and to understand and reflect upon how their own mental state (beliefs, thoughts, feelings and intentions) can both influence and be influenced by their interactions with their child (Luyten et al., 2017).

Understanding deficits in mentalising has been central to empirical and clinical work. Two categories of impairments are understood to operate: hypomentalisation refers to a concrete thought process and an inability to consider the complexity of one’s own or others mind and hypermentalisation whereby one is overly certain about their own and others mental states, despite little supporting evidence (Fonagy et al., 2016). Conversely, genuine mentalising is characterised by an awareness of the opaqueness of mental states (Allen, Fonagy & Bateman, 2008).

Impairments in PRF are hypothesised to result in a host of difficulties such as disrupted attachments, impairments in mentalising ability, the development of psychopathology in later life (Fonagy et al., 2002), impulsive behaviours, difficulties in affect regulation (Fonagy et al., 1998), externalising behaviours (Camoirano, 2017) and difficulties with identifying and labelling emotions. A traumatised parent may be easily triggered in a parent-child interaction if they rely upon non-mentalling modes (such as psychic equivalence, teleological and pretend modes), and the child’s distress exposes them to unresolved trauma and un-mentalled ‘ghosts in the nursery’ (Ensink et al., 2014). Emerging evidence, has attempted to make sense of intergenerational transmission of trauma and PRF is hypothesised to protect parents from transmitting trauma to the subsequent generation (Berthelot et al.,
Being able to genuinely mentalise your traumatic experiences, such as childhood abuse has been thought to better enable parents to tune into and prevent themselves from engaging in similar forms of frightening and distressing interactions that they were subjected to, thus holding the potential to end the cycle of abuse (Allen, 2013).

The ability to mentalise is not static. It fluctuates depending on experiences of trauma and across time more broadly. Research has demonstrated an inverse relationship between arousal and mentalising ability (Mayes, 2000). Neuroscience has suggested the capacity to mentalise is an evolutionarily prewired (Tomasello, 2018). From an evolutionary perspective, it is adaptive that as arousal increases the brain shifts from flexible, slower, prefrontal executive functions to more automatic and habitual responses controlled by posterior cortical and limbic structures in the brain (Luyten & Fonagy, 2012). Over time, in the face of prolonged and chronic trauma, this kind of automatic mentalising can in fact become detrimental to one’s functioning, since being unable to adequately mentalise these upsetting experiences is associated with engaging in externalising behaviours such as dissociation and self-harm (Luyten & Fonagy, 2012).

Military deployments by their very nature are associated with an increased risk of encountering multiple traumatic experiences. There is, therefore, a risk of intergenerational transmission of trauma occurring in military families. If military parents are returning home from deployment stressed and potentially traumatised, it may be challenging to reflect on their own mental state or their child’s. Taken further, there is the possibility that a reduction in RF, in fact protects the individual within combat circumstances on deployment (Basham, 2008). Learning to suppress and compartmentalise emotions, whilst exhibiting a lack of curiosity towards others’ mental states, may aid survival in combat situations and enable one to react more quickly and successfully to potential threat.
1.6 The Current Study

Despite the reported influence of parental PTSD on their children, there is a paucity of research examining the influence of veteran father's PTSD on their offspring's wellbeing and outcomes. Research is required to build on such theories of secondary traumatisation within a military setting. Our study therefore sought to explore whether RF might be one potential mechanism through which the intergenerational transmission of trauma operates. To the best of our knowledge, this study is the first which has attempted to study this phenomenon within a military sample in this way. Better understanding of these mechanisms and dynamics could inform appropriate interventions and minimise the impact of parental PTSD on the family.

A mixed-methods design was employed using an online survey to collect quantitative data and interviews with the veteran fathers to collect text data, which was analysed qualitatively. This design was felt to provide a more complete account of the impact of trauma in military families by providing multiple opportunities for fathers to share their experiences across the research process, thus enabling the research questions to be answered in more depth and provide a richer insight in veteran's experiences. Qualitative interviews elicited first-hand perspectives from veteran fathers about their subjective experience of their military-related trauma, and their perspectives about the impact of their PTSD on their family.

1.7 Study Aims

Accordingly, the aims of this research sought to address the following six questions, using quantitative and qualitative methods:

**Quantitative:**

1. Is trauma symptomatology associated with poorer reflective functioning?
2. Is trauma symptomatology associated with poorer child functioning?
3. Does veteran fathers’ trauma symptomatology predict their child’s functioning?

4. Does reflective functioning mediate the association between the fathers’ trauma symptomatology and their child’s functioning?

Qualitative:

5. How do veteran fathers make sense of their trauma symptoms?

6. How do veteran fathers understand the impact of their trauma on their family?

2. Methods

The current study formed part of a joint research project with ‘Investigating a general risk factor for intergenerational transmission of psychopathology in children in military families’ (Shanmugam, 2020; see Appendix B for our individual contributions).

2.1 General Overview

2.1.1 Study Design

The project utilised a mixed-methods design, employing both quantitative and qualitative methods. The first phase of the study involved examining the relationship between fathers’ PTSD symptomology and reflective functioning, and the emotional and behavioural functioning of their children, within the identified veteran population, using quantitative data and a cross-sectional correlational study design. The second phase involved conducting semi-structured interviews with a sub-sample of the veteran fathers. A sequential explanatory design was utilised whereby the quantitative data was first collected and then used to ‘situate the sample’ in the qualitative analysis.
2.1.2 Ethics

Ethical approval for this study was granted by the University College London Research Ethics Committee on 26th March 2019 (15609/001) and Help for Heroes on 1st November 2019 (Appendix C).

2.1.3 Public and patient Involvement (PPI) and Piloting

2.1.3.1 PPI

The research design was informed by informal discussions with currently serving military personnel. Feedback on the demographics questionnaire suggested that we should reconsider the use of language regarding deployments and ask participants to distinguish whether their deployment was ‘kinetic’ or ‘non-kinetic operational’. This is an expression used in the military to suggest whether the deployment was a combat mission involving active warfare. Furthermore, PPI input assisted us with developing the breakdown of military role categories into the following types: combat arms, combat support, combat service support.

2.1.3.2 Pilot Interview

One pilot interview was conducted to ensure that the questions were easily understood and pertinent to answering the research questions. No further questions were added to the interview schedule as a result. Data collected from the pilot interview was not included in the qualitative analysis since the interviewee did not meet the full inclusion criteria for the study, as their score on the PTSD outcome measure was below threshold.

3 Combat arms referred to positions which participated in direct tactical ground combat. Combat support referred to units which focused on providing operational support to combat units and combat service support referred to positions which provided logistical support to combat units.
2.1.4 Recruitment Strategy

Veterans were recruited between June 2019 and April 2020. The initial recruitment strategy focused on email advertisements (Appendix D) distributed by four key veteran charities, however, a second round of recruitment was necessary to increase the sample size and a full list of organisations who supported recruitment can be found in Appendix E.

In addition, a social media campaign was devised to support recruitment and a financial reimbursement was introduced in the form of a £5 Amazon voucher. Furthermore, at a later stage two further recruitment strategies were introduced to recruit a sufficient sample size. Firstly, a snowballing sampling strategy was utilised whereby participants who had previously taken part in the research were contacted and asked to recommend the research project to other contacts who fit the research criteria and who might be willing participants (see Appendix R for an example email). Secondly, The Centre for Veterans’ Health also contacted a list of veteran patients who had attended their pain clinic and opted to be contacted for further research, and invited them to participate in this research.

The flow and attrition of participants through both phases of the study are provided in Appendix F.

2.2 Phase One

2.2.1 Inclusion Criteria

To be eligible for participation, potential participants were required to meet the following criteria:

i. Aged 18 or over

ii. Male

iii. A military veteran (Ex-military personnel/Armed Forces Leaver)

iv. Have at least one child aged between 4-17 years
2.2.2 Sample

One hundred and twelve participants completed phase one, demographic data on the participants is presented in Table 1 to ‘situate’ the sample for phase two (Elliott, Fischer & Rennie, 1999).

Table 1

Phase One: Participant Demographic Information

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N (112)</th>
<th>%</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Military Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of Military Service (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 4</td>
<td>4</td>
<td>4%</td>
<td>14.8</td>
<td>6.99</td>
</tr>
<tr>
<td>5 to 9</td>
<td>24</td>
<td>21%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 to 14</td>
<td>31</td>
<td>28%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 to 19</td>
<td>19</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 to 24</td>
<td>25</td>
<td>22%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 to 29</td>
<td>7</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30+</td>
<td>2</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Branch of Armed Forces</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royal Navy</td>
<td>11</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Army</td>
<td>78</td>
<td>70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royal Air Force</td>
<td>10</td>
<td>9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royal Marines</td>
<td>12</td>
<td>11%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of Engagement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>103</td>
<td>92%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve Forces</td>
<td>9</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of Role</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combat Arms</td>
<td>65</td>
<td>58%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combat Support</td>
<td>29</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combat Service Support</td>
<td>9</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Deployment Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deployed Operationally</td>
<td>46</td>
<td>41%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deployed Non-operation</td>
<td>8</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both</td>
<td>58</td>
<td>52%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Participants were asked to record all the ages of their children, and data was collected on their child that was aged between 4-17 years old.

### 2.2.3 Procedure and Data Collection

Participants who expressed an interest in participating by responding to the email advertisement were emailed an information sheet (Appendix G) and their unique login details for UCL’s Patient Outcomes Database (POD). All online survey data was collected on POD, a secure data collection platform, developed by researchers at UCL to be used in research projects and by NHS mental health services. All data was pseudoanonymised whereby participants were given a unique, non-personally identifiable participant code which was linked to their POD login username.
Prior to completing the online questionnaires, participants were asked to view the study information sheet and electronically consent to take part in the study (Appendix H). They were then required to complete a screening questionnaire (Appendix I) which established their eligibility to take part in the study. Those who were eligible to take part were then directed to complete a demographics questionnaire (Appendix J) which provided information on their military background and family setup. Participants then described their mental health symptomatology using standardised and widely used psychometric instruments (see Appendix K for full list of outcome measures). Finally, participants were asked if they consented to being contacted to take part in further research and were provided with an electronic debrief sheet (Appendix L).

2.2.4 Outcome Measures

Paternal Mental Health:

The Impact of Events Scale-Revised (IES-R; Weiss, 2007), one of the most widely-used self-report measures within the trauma literature has demonstrated good validity and reliability (Creamer, Bell & Failla, 2008), and was used to assess military-related trauma symptomology. It includes 22-items and assessed for three clusters of symptoms which are informed by diagnostic criteria for PTSD. Scores range from a minimum of zero to a maximum of 88.

Reflective Functioning:

Reflective function was measured using the Reflective Functioning Questionnaire 8-item version (RFQ-8; Fonagy et al., 2016). This brief screening measure was developed from the original 54-item questionnaire. It is comprised of two scales assessing for the constructs of Certainty about Mental States (RFQ_C) and Uncertainty about Mental States (RFQ_U). Raw scores measured on a 7-point Likert scale were re-coded in order to most accurately capture an individual’s
capacity for mentalising, given that self-report questionnaires require self-knowledge. The scores on each subscale ranged from zero to a maximum of three.

High scores on the RFQ_U suggest hypomentalising, with lower scores reflecting genuine mentalising ability. Low scores on the RFQ_C suggest hypermentalising whereas high scores on this scale was characteristic of genuine mentalising. The two sub-scales had satisfactory internal consistency and test-retest reliability across both clinical and non-clinical samples (Fonagy et al., 2016). Given the relatively recent development of this of this scale, there are not yet any well-established or validated cut-off scores for clinical samples (P. Fonagy, personal communication, 1st July 2019).

Parent-rated Child Functioning

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was completed by the veteran father on behalf of their child, who must be aged 4 to 17 years old. It comprised of 25 questions to assess the child’s emotional and behavioural functioning and resulted in a ‘total difficulty score’, calculated by summing scores on the four sub-scales. Scores ranged from zero to 40. Cut-off values have been developed by Goodman and Goodman (2009) to interpret total difficulty scores: “close to average” 0-13, “slightly raised” 14-16, “high” 17-19 and “very high” 20-40. Higher scores on the SDQ have been found to be associated with greater psychopathology (Goodman & Goodman, 2009).

2.2.5 Method of Analysis

Statistical Power

Due to a lack of similar prior research in this area, we ran two versions of the power calculation including either $r=0.10$ (small effect size; Cohen, 1992) or $r=0.30$ (moderate effect size; Cohen, 1992). In the face of the unknown we have considered these two conservative options.
The power calculation was conducted using G*Power software (Faul et al., 2007), with the standard alpha of 0.05. In order to have 80% power to the necessary sample size was estimated to be 160 participants, assuming the third predictor as \( r=0.10 \) and 68 participants when the third predictor was assumed to be \( r=0.30 \). We have, therefore, concluded that the sample size has to be between 68 to 160 participants.

Pre-Analysis Data Preparation

Data was cleaned using SPSS version 25, and the amount of missing data was analysed. The phase one online survey had been designed to prevent participants from missing individual questionnaire items in order to minimise the occurrence of missing data. As such, there was no item-level non-responsiveness within the individual variables. Two participants did not complete any of the necessary variables aside from the demographic’s questionnaire, and were excluded from all analyses except the participant demographics, leaving an effective sample of 110 participants.

Where five percent or less of data is missing for any particular participant, the SPSS Expectation-Maximisation algorithm was used to impute the remaining single missing values (Enders, 2003).

Furthermore, data was analysed for normality using univariate and graphical approaches. Skewness and kurtosis values were calculated (see Table 3 in section 3.1.1). The Shapiro-Wilk tested for normality and indicated that three of four variables were not normally distributed (\( p<.001 \) for RFQ_C, RFQ_U and IES-R) which was taken into consideration in the analyses.

Data Analysis Plan & Study Hypotheses

Data from the online study was analysed to address four questions:

1. Is trauma symptomatology associated with poorer reflective functioning?
2. Is trauma symptomatology associated with poorer child functioning?
Bivariate strength of associations were calculated to determine the relationship between trauma symptomatology and reflective functioning, and child functioning. Given that assumptions of normality, homoscedasticity and linearity were not met, strength of association was calculated using Spearman’s rho correlation coefficients.

3. **Does veteran fathers’ trauma symptomatology predict their child’s functioning?**

A multiple linear regression was utilised to predict child functioning given the veteran fathers’ trauma symptomatology and RF. We were particularly interested in the RFQ_U variable as a measure of mentalising ability given that this scale was found better able to predict clinical cases of Borderline Personality Disorder (Fonagy et al., 2016). This has also been replicated in a more recent study (De Meulemeester et al., 2018) and most recently the RFQ_U, not the RFQ_C, was found to be associated with impaired RF on the Parent Development Interview (PDI; Handeland et al., 2019). For these reasons, we did not include RFQ_C in the regression model.

4. **Does reflective functioning mediate the association between the fathers’ trauma symptomatology and their child’s functioning?**

Finally, mediation analyses were conducted using the PROCESS computational tool for path analysis-based moderation and mediation analysis (Hayes, 2012). In this model, variable X is modelled to influence Y directly as well as indirectly through a single mediator variable located between X and Y (see Figure 1; Hayes, 2012).
2.3 Phase Two

2.3.1 Inclusion Criteria

A small subsample of participants were consecutively sampled based on the following criteria:

i. Have taken part in phase one of the research project i.e. quantitative online survey and consented to participate in further research

ii. A score above the clinical threshold on the IES-R (scored 33 or more)
iii. History of deployment in their military career

iv. Could communicate proficiently in English

A cut-off of 33 or above was selected on the IES-R since according to the DSM-IV this was indicative of probable PTSD for veterans (Creamer, Bell & Failla, 2003). While further research has suggested that this cut-off may be too low for a veteran population (Murphy et al., 2017) with 46 or above instead being proposed, we still chose to use a cut-off of 33 in order to recruit a more heterogeneous sample on this dimension.

2.3.2 Sample

Thirteen participants took part in the semi-structured interview. Table 2 intends to present the characteristics of each participant who took part in the semi-structured interviews in order to situate the sample. The means for the three outcome measures in phase two were broadly similar to this in phase one, aside from the IES-R which was understandably higher in the phase two sample given that a cut-off of 33 or above was used to sample participants.

Some of their data has been purposefully generalised in order to protect confidentiality. Overall, 13 veteran fathers took part, with a mean age of 47 (SD = 5.78, Range = 37-59) and on average they had 3 children (SD = 1.29, Range = 1-6). The majority of veterans had served over 10 years in the military (n=12), the mean length of military service was 17 years (SD = 5.45, Range = 7-26). Participants’ scores are also presented, the mean IES-R total score was 47 (SD = 14, Range = 33-82) whilst the mean for RFQ_C was 0.82 (SD = 0.95, Range = 0-2.17) and RFQ_U was 1.05 (SD = 0.87, Range = 0-3) and the mean SDQ score was 14 (SD = 9.32, Range = 1-35).
Table 2.

Phase Two: Participant Demographic Information and Descriptive Statistics

<table>
<thead>
<tr>
<th>Participant Number</th>
<th>Participant Age (years)</th>
<th>Length of Military Service (years)</th>
<th>Branch of Armed Forces</th>
<th>Type of Role</th>
<th>Military Rank (highest achieved)</th>
<th>Number of children</th>
<th>Age Range of Children (years)</th>
<th>Relationship Status</th>
<th>Psychological Support (Y/N)</th>
<th>PTSD Severity (IES-R Score)</th>
<th>SDQ Score (Child outcome)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>35 to 45</td>
<td>5 to 10</td>
<td>The British Army</td>
<td>Combat Arms</td>
<td>Non-commissioned rank</td>
<td>4</td>
<td>9-16</td>
<td>Married</td>
<td>N</td>
<td>Moderate</td>
<td>0.17</td>
</tr>
<tr>
<td>P2</td>
<td>35 to 45</td>
<td>20 to 25</td>
<td>Royal Navy</td>
<td>Combat Support</td>
<td>Non-commissioned rank</td>
<td>2</td>
<td>4-7</td>
<td>Married</td>
<td>Y</td>
<td>Moderate</td>
<td>1.67</td>
</tr>
<tr>
<td>P3</td>
<td>45 to 55</td>
<td>20 to 25</td>
<td>The British Army</td>
<td>Combat Arms</td>
<td>Commissioned officer</td>
<td>2</td>
<td>12-14</td>
<td>Single</td>
<td>Y</td>
<td>Mid</td>
<td>0.83</td>
</tr>
<tr>
<td>P4</td>
<td>35 to 45</td>
<td>10 to 15</td>
<td>Royal Air Force</td>
<td>Combat Arms</td>
<td>Commissioned officer</td>
<td>2</td>
<td>16-21</td>
<td>Married</td>
<td>Y</td>
<td>Mid</td>
<td>2.17</td>
</tr>
<tr>
<td>P5</td>
<td>45 to 55</td>
<td>15 to 20</td>
<td>The British Army</td>
<td>Combat Support</td>
<td>Commissioned officer</td>
<td>2</td>
<td>11-13</td>
<td>Married</td>
<td>Y</td>
<td>Severe</td>
<td>1.5</td>
</tr>
<tr>
<td>P6</td>
<td>45 to 55</td>
<td>15 to 20</td>
<td>Royal Marines</td>
<td>Combat Arms</td>
<td>Non-commissioned rank</td>
<td>3</td>
<td>11-16</td>
<td>Married</td>
<td>Y</td>
<td>Severe</td>
<td>0</td>
</tr>
<tr>
<td>P7</td>
<td>45 to 55</td>
<td>15 to 20</td>
<td>Royal Air Force</td>
<td>Combat Support</td>
<td>Commissioned officer</td>
<td>4+</td>
<td>17-30</td>
<td>Married</td>
<td>Y</td>
<td>Mid</td>
<td>2.67</td>
</tr>
<tr>
<td>P8</td>
<td>45 to 55</td>
<td>20 to 25</td>
<td>The British Army</td>
<td>Combat Service Support</td>
<td>Commissioned officer</td>
<td>4</td>
<td>17-35</td>
<td>Married</td>
<td>Y</td>
<td>Moderate</td>
<td>0</td>
</tr>
<tr>
<td>P9</td>
<td>45 to 55</td>
<td>10 to 15</td>
<td>The British Army</td>
<td>Combat Support</td>
<td>Non-commissioned rank</td>
<td>2</td>
<td>12-14</td>
<td>Married</td>
<td>Y</td>
<td>Severe</td>
<td>0</td>
</tr>
<tr>
<td>P10</td>
<td>55 to 65</td>
<td>10 to 15</td>
<td>Royal Navy</td>
<td>Combat Arms</td>
<td>Non-commissioned rank</td>
<td>4</td>
<td>9-26</td>
<td>Married</td>
<td>N</td>
<td>Mid</td>
<td>1.67</td>
</tr>
<tr>
<td>P11</td>
<td>45 to 55</td>
<td>15 to 20</td>
<td>The British Army</td>
<td>Combat Arms</td>
<td>Non-commissioned rank</td>
<td>3</td>
<td>16-25</td>
<td>Single</td>
<td>Y</td>
<td>Severe</td>
<td>0</td>
</tr>
<tr>
<td>P12</td>
<td>35 to 45</td>
<td>15 to 20</td>
<td>The British Army</td>
<td>Combat Service Support</td>
<td>Non-commissioned rank</td>
<td>2</td>
<td>9-14</td>
<td>Married</td>
<td>Y</td>
<td>Mid</td>
<td>0</td>
</tr>
<tr>
<td>P13</td>
<td>45 to 55</td>
<td>25 to 30</td>
<td>Royal Marines</td>
<td>Combat Arms</td>
<td>Non-commissioned rank</td>
<td>1</td>
<td>13</td>
<td>Long-term relationship</td>
<td>Y</td>
<td>Mid</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. Type of role - see methods; Military Rank - participants positions have been anonymised and referred to more generally. In the broadest sense 'Commissioned officer' refers to those in the highest ranks of responsibility within the British Armed Forces and derive their authority from a commission issued by the monarch and are typically expected to have a university degree. Psychological support – refers to whether or not the veteran has received psychological input for their mental health difficulties. IES-R score - a cut off for level of PTSD has been developed for ease of reference. "Mild" 33-40, "Moderate" 40-59, "Severe" 50-88. SDQ score - established cut offs were used: "Close to average" 0-13, "Slightly raised" 14-16, "High" 17-19, "Very High" 20-40.
2.3.3 Interview Schedule

The semi-structured interview schedule was developed, based on the research questions, through an iterative process and with support from supervision; the full interview schedule can be found in Appendix P. The aim was to establish a rich understanding of veterans’ internal words in relation to the research questions. As mentioned in section 2.1.3.2, a pilot interview was conducted as part of interview development and to assess the effectiveness of the interview schedule at answering the research questions. Likewise, to maximise alignment with the research questions, the interview schedule was reviewed and refined after the initial three interviews.

The interview schedule consisted of broad questions allowing for the participant’s personal interpretation such as “Have your ‘trauma experiences’ had an impact on your current relationships with friends or your partner (if applicable)?”, with follow-up questions available, where necessary, to prompt the interviewer such as ‘in what way have they had an impact?’.

The interview addressed the following broad areas of interest:

i. Participant’s family setup i.e. partner and ages of child(ren)
ii. Traumatic experiences and relationship to previous deployment
iii. Impact of traumatic experiences on their current relationship
iv. Impact of traumatic experiences on family dynamics/relations
v. Impact of traumatic experiences on their children
vi. How their children understand their difficulties
vii. Openness with their children about their experiences and/or difficulties
viii. Personal impact of their traumatic experiences
ix. Support accessed by participant for their difficulties
2.3.4 Impact on participants

A minority of participants sounded emotionally touched when recounting their experiences and the impact on themselves and their families, although none of them expressed this directly and none wished to terminate the interview. The majority also spontaneously reported having been pleased to have the opportunity to share their views and have the potential to shape support offered to future veterans.

2.3.5 Procedure & Data Collection

The researcher had email contact with those who met the inclusion criteria (Appendix M) and they were sent a study information sheet (Appendix N) and consented either verbally or in person using the consent form (Appendix O). One of the thirteen participants interviewed chose to take part in a face-to-face interview at a university building and the rest took part via telephone.

Interviews lasted approximately 60 minutes and all of the interviews were digitally recorded using an encrypted recording device with participants’ agreement. Participants were reimbursed with a £20 Amazon voucher in recognition for their participation and travel expenses if these had occurred. Additional time was allowed at the end of the interview to reflect on the interview process and debrief participants (see Appendix Q for debrief sheet).

In order to reduce interviewer bias and standardise the interviewer’s interaction with the interviewee, the interviewer was not aware of the interviewees’ RF scores until after the interview was complete. It was felt that if the interviewer was aware that the interviewee had a lower RF score, they may have asked questions in a different manner or not asked follow-up questions as extensively (Pannucci & Wilkins, 2010).
2.3.6 Method of Analysis

The interview data was analysed using Braun and Clarke’s (2006) method of Thematic Analysis. We followed, as recommended, their six-stage procedure:

i. ‘Immersion’ in the data

Each of the interviews were transcribed using Express Scribe Transcription Software. All of the interviews were transcribed verbatim by myself in order to familiarise myself with the data (Riessman, 1993). The transcription focused on verbal content rather than moment to moment interaction, however, long pauses, laughter and emphasis on certain words were noted. Transcripts were then re-read before coding commenced (see Appendix S for an extract of a transcribed interview).

ii. Generation of initial codes

The qualitative data analysis software NVivo (version 10) was utilised for the coding process (Bazeley, 2007). During this process, the author worked systematically through each transcript, giving full attention to each data item. All data was coded, regardless of assumptions being made about what might be relevant to the research question. Initially data was coded at a basic descriptive level and through different iterations a more interpretative level of coding was reached. Data was coded systematically for both semantic and latent content, keeping initially as close to the original meaning as possible (see Appendix T for a coded excerpt).

iii. Searching for themes and subthemes

Once the transcripts had undergone the coding process, the codes were then collated and consideration was made as to how codes fitted together to form overarching themes. This process was based upon the explicit content of what the participant reported, as opposed to applying any predetermined theoretical framework.

iv. Examining and refinement of themes
Themes and subthemes were reviewed over several iterations to ensure they were coherent and meaningful, and through this cyclical process those themes outlined in the results section were agreed upon. Credibility checks outlined below were also implemented.

2.3.7 Quality Assurance & Credibility Checks

There was adherence to guidelines for qualitative research developed by Elliot, Fischer and Rennie (1999) to ensure best practice. Their guidelines were developed to enhance the credibility of qualitative research design and analyses. More specifically, relevant information about the participants, taking part in the interviews were included in the ‘participant characteristics’ summary to sufficiently ‘situate the sample’. Furthermore, another analyst independently coded four of the interviews using the procedure outlined above. Following this our codes were cross-analysed and discussions took place to build a consensus about the initial themes. The majority of the codes overlapped with those originally identified by the author and the novel codes identified by the second analyst were discussed and incorporated into the analysis. Respondent validity was not pursued with the interviewees at this time due to time constraints, although it was hoped this could take place at a later date.

Moreover, bracketing in the form of a reflexive journal was adopted throughout the research process, in order to enhance the researcher’s awareness of their preconceptions and support a reflexive stance (Ahern, 1999). Supervision also enabled the researcher to reflect on how their own emerging views and assumptions impacted on the collection and analyses of data (Willig, 2008).

2.3.8 Reflexive statement

It is important to acknowledge and demonstrate transparency about the researcher’s theoretical perspective and assumptions, and acknowledge how this
may shape the validity of the qualitative data analysis through biased interpretations (Braun & Clark, 2013). I am a white female Trainee Clinical Psychologist, at the time of writing, in my late twenties and training at University College London. I do not have experience of working clinically with veterans on psychological issues and nobody in my immediate or extended family has worked within the military. Nevertheless, my clinical placement in final year focused on working with families who had often experienced significant intergenerational trauma, which contributed to parents’ drug and alcohol use and their involvement with social services and care proceedings. For this reason and my theoretical understanding of attachment and intergenerational trauma, it is likely I came to the current study with preconceptions about the impact of parental trauma on their offspring and early attachment experiences. In particular, working with parents with in care proceedings, has given me a clear insight into the devastating consequences of early experiences of neglect and abuse on their children, and the relationship with the parent’s own experiences of parenting as an infant. It is likely, therefore, that these experiences have shaped my understanding of the impact of parental PTSD on their offspring and the importance of providing interventions to families at an early stage in the child’s development.

3. Results

3.1 Phase One – Quantitative Analysis

3.1.1 Descriptive statistics

Descriptive statistics for each variable are presented in Table 3.
Table 3.

Mean, standard deviation, number of observations and indicators of normality of variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES-R Total Score</td>
<td>110</td>
<td>40.97</td>
<td>25.14</td>
<td>-0.33</td>
<td>-1.14</td>
</tr>
<tr>
<td>SDQ Total Score</td>
<td>110</td>
<td>15.12</td>
<td>7.96</td>
<td>0.21</td>
<td>-0.59</td>
</tr>
<tr>
<td>RFQ certainty about mental state states (RFQ_C)</td>
<td>110</td>
<td>0.74</td>
<td>0.86</td>
<td>0.97</td>
<td>-0.24</td>
</tr>
<tr>
<td>RFQ uncertainty about mental states (RFQ_U)</td>
<td>110</td>
<td>1.07</td>
<td>0.81</td>
<td>0.4</td>
<td>-0.96</td>
</tr>
</tbody>
</table>

3.1.2 Variable Correlations

Spearman’s rho correlation coefficients were calculated to show the relationships between variables and are presented in Table 4. As previously mentioned, we were particularly interested in the RFQ_U variable as a measure of mentalising ability (Fonagy et al., 2016). Lower scores on the RFQ_U were taken to reflect genuine mentalising ability. All the correlations were statistically significant, confirming that the variables were indeed related to each other.
Table 4.

*Relationships between trauma symptomatology, reflective functioning and child functioning assessed by non-parametric correlations (Spearman’s rho)*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IES-R</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SDQ</td>
<td>.460**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>RFQ_C</td>
<td>-.522**</td>
<td>-.451**</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>RFQ_U</td>
<td>.593**</td>
<td>.451**</td>
<td>-.778**</td>
</tr>
</tbody>
</table>

Note 1) Impact of Events Scale – Revised 2) Strengths and Difficulties Questionnaire 3) Reflective Functioning Questionnaire-8 (Certainty) 4) Reflective Functioning Questionnaire-8 (Uncertainty)

** indicates a correlation significant at p<.001

3.1.3 *Predicting Child Outcome*

A multiple regression analysis was selected to examine what factors, if any, may predict child functioning (SDQ scores). Given the lack of existing research within this field, which could inform the order of entry into a hierarchical model, a forced entry method was adopted. The IES-R total score and RFQ_U subscale were entered into the regression model. Together, these variables accounted for 25.1% of the variance in SDQ scores. Both IES-R total scores ($B = .100, p = .003$) and RFQ_U ($B = 2.398, p = .020$) were significant predictor variables, see Table 5. An ANOVA confirmed that this regression model was significantly better at predicting SDQ compared to not fitting a model, $F (2, 107) = 17.94, p< .001$. 

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Table 5

_Multivariate predictors of child outcome (SDQ)_

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardised coefficients</th>
<th>Standardised coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>BS Standard error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>8.44</td>
<td>1.31</td>
</tr>
<tr>
<td>IES-R Total Score</td>
<td>.10</td>
<td>0.33</td>
</tr>
<tr>
<td>RFQ uncertainty about mental states (RFQ_U)</td>
<td>2.40</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Note *p<.05, ** p<.01, *** p<.001
3.1.4 Mediation Analyses

This analysis explored whether reflective functioning (uncertainty about mental states; RFQ_U) mediated the analysis between veteran trauma symptomatology (IES-R) and child functioning (SDQ). There were statistically significant total, direct and indirect effects of veteran father trauma on child functioning, when RFQ_U was entered as a mediating variable. Results are depicted graphically in Figure 2.

Figure 2

A Medialional model with RFQ_U as a mediator of the association between veteran father trauma symptomatology (IES-R) and child outcome (SDQ).

Note. Dotted line = indirect effect; *p<.05, ** p<.01, *** p<.001
In the first part of the model, the regression of IES-R on the potential mediator, RFQ_U was positive and statistically significant ($\beta = .0190$, s.e. = .0025, $p < .001$). Secondly, it was demonstrated that, the mediator (RFQ_U), after controlling for IES-R, was also a significant predictor of child outcome ($\beta = 2.3981$, s.e. = 1.0151, $p = .0200$). Thirdly, after controlling for the mediator (RFQ_U), IES-R was a significant predictor of child outcome (SDQ) ($\beta = .1002$, s.e. = .0328, $p = .0028$). Finally, the mediation model showed that the indirect effect of veteran father trauma on child outcome, partially mediated by reflective functioning, was significant ($\beta = .0456$, 95% CI [.0353, .1652]).

3.2 Phase Two – Qualitative Analysis

3.3 Themes

Analysis of the qualitative data from the transcripts produced a total of five themes and seventeen subthemes (Table 6; in brackets denotes the research question answered), to address the two research questions:

1. How they make sense of their trauma symptoms

2. How they understand the wider impact of their trauma within their family system

The themes were grouped into three clusters: a) Life Changes, b) Myself and those around me, c) Moving on.

The research questions have not been answered sequentially so as to provide a more progressive narrative for the reader by layering the themes. Participants are identifiable from their designated code, corresponding to Table 2, and Int. denotes the interviewer. For parsimony, linking words key to understanding the meaning of the quote have been inserted in square brackets. The themes are explored in more detail below, and are illustrated using participant quotes. Similarities and differences between participants were examined and the frequency of themes across all participants are presented in Table 7.
### Table 6.

**Themes and Subthemes**

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Military Family Membership</td>
<td>a) Seeping into family life <em>(RQ2)</em></td>
</tr>
<tr>
<td></td>
<td><em>(RQ1&amp;2)</em></td>
<td>b) Aware of changes to children <em>(RQ2)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) Repeating patterns of trauma <em>(RQ1&amp;2)</em></td>
</tr>
<tr>
<td></td>
<td>2. Transitions - &quot;A new normal&quot;</td>
<td>a) Adjusting back to civilian life</td>
</tr>
<tr>
<td></td>
<td><em>(RQ1)</em></td>
<td>b) Adjusting back to family life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) Who am I? <em>&quot;A different person</em></td>
</tr>
<tr>
<td>Myself and those around me</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Disconnectedness</td>
<td>a) From comrades</td>
</tr>
<tr>
<td></td>
<td><em>(RQ1)</em></td>
<td>b) From civilian life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) From family</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) From one's self</td>
</tr>
<tr>
<td></td>
<td>4. Family Functioning</td>
<td>a) Separation from wider social network</td>
</tr>
<tr>
<td></td>
<td><em>(RQ2)</em></td>
<td>b) Closest relationships suffer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) &quot;Supermum&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) Father-child relationship</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e) Young caregiver</td>
</tr>
<tr>
<td>Moving on</td>
<td>5. Personal Growth</td>
<td>a) Adaptability &amp; Resilience <em>(RQ1&amp;2)</em></td>
</tr>
<tr>
<td></td>
<td><em>(RQ1&amp;2)</em></td>
<td>b) Developing a new awareness <em>(RQ1)</em></td>
</tr>
</tbody>
</table>

Note: RQ1 refers to answering research question 1, RQ2 refers to answering research question 2
Table 7.

Frequency of Themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Subthemes</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
<th>P6</th>
<th>P7</th>
<th>P8</th>
<th>P9</th>
<th>P10</th>
<th>P11</th>
<th>P12</th>
<th>P13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Military Family Membership</td>
<td>a) Seeping into family life</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>b) Aware of changes to children</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>c) Repeating patterns of trauma</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>2. Transitions - &quot;A new normal&quot;</td>
<td>a) Adjusting back to civilian life</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b) Adjusting back to family life</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>c) Who am I? &quot;A different person&quot;</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3.Disconnectedness</td>
<td>a) From comrades</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
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<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>b) From civilian life</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>c) From family</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
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<td>d) From one’s self</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4. Family Functioning</td>
<td>a) Separation from wider social network</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>b) Closest relationships suffer</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>c) &quot;Supermum&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>d) Father-child relationship</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>5. Personal Growth</td>
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Military Family Membership

The majority of participants described the importance of the military presence for them and their families. Linked to this was their concern for how past exposure to trauma, experienced either prior to the military or during military service, would subsequently affect their children’s current or future development and wellbeing. This was not universally experienced and a few participants felt either their children had not been impacted in any way because they were too young or had been away at boarding school for the time they spent in the military.

a) Seeping into family life

Eleven of the participants described the pervasive nature of changes to their behaviour linked to combat experiences on their family’s lives. No matter how much the veterans tried to protect and shield their children from these changes, they felt that their children picked up on this regardless.

P1: …. they’re smarter than I give them credit for, kids know right. You think kids don’t know oh they know, they soak up everything

P2: ...it undoubtedly has an effect no matter how hard you try to be objective and to shield them from it, there’s always gunna be a little bit of transference, a little bit of leakage. Unfortunately so I think that’s always gunna have at least a small effect on them.

Veterans spoke of using coping strategies to cope with the consequences of their combat such as compartmentalising to avoid feeling too overwhelmed by their experiences, however, there was a sense that no matter how hard they tried the pervasive nature of these traumatic experiences meant that it ‘seeped’ back into the family.

b) Aware of changes to children

Ten participants spoke about noticing changes to their children’s emotional or behavioural wellbeing, related to their military deployment or trauma symptoms,
which varied in severity and length. Some raised concerns about how their child had coped whilst they were away on deployment, in the past, whereas others were concerned about their child’s current mental health or potential for certain ways of coping to impact their social and interpersonal development in the future.

P1: It put the kids through a lot of stress. My daughter she suffered with what the doctor called stress related alopecia….and she was always waking up in the middle of the night, shouting or just worried that I was going away again.

P6: My middle son used to suffer with separation anxiety, he got it quite badly. When he was younger, so every time I’d go away…. well I was never there but my wife used to say, it was horrendous, he just used to scream for hours.

P8: I do think there’s a detrimental impact [of military trauma] towards children. Yeah she’s [daughter] experienced a lot and I think an amount of that is caused by….by the military. She’s been under CAMHS mental health. She’s also sort of attempted suicide a couple of times.

P12: [Talking about himself becoming blunter, more straightforward talking and “lacking a bullshit filter” since being in the military]. Ermm…I think my eldest daughter’s learning some of it from me and I think that might be detrimental to her when she’s older…

In general, there was a pattern in the data, father’s with less severe PTSD (IES-R scores) also tended to rate their child’s emotional and behavioural functioning as less severe. Likewise, those with “severe” levels of PTSD, also tended to rate their child has having “high” or “very high” numbers of emotional and behavioural difficulties.

c) Repeating patterns of trauma

While this was only noted by a subsample, five of the participants, felt it significant to understanding the overarching theme and research questions. A pattern was noted in terms of the participants that endorsed this subtheme, all but one of the participants, had “moderate” or “severe” trauma scores and a “very high” number difficulties in terms of child functioning on the SDQ. This is interesting as here participants not only referred to their military-related trauma within the interview
but closely intertwined with this was their experience of childhood trauma, which had
in fact driven their decision to join the military in the first place.

P11: …my mum’s an alcoholic, my dad was physically violent to me and my brother
and I joined the Army really…I joined at 16…yeah my dad couldn’t wait for me to go
away, and I haven’t spoken to them since.

P9: …and [the military was a] really a good way to get out and away from my home
situation with my Mum, and you know get fed and housed. I had massive problems
at home with my Mum and I had to leave, the army said ‘we’ll have you in 3 months’,
so I joined the Army.

P13: So I had a very bad childhood…well I joined the Marines to get away, however,
it wasn’t good because you already had or I’ve been told may have had PTSD
before I joined up.

There was also an understanding that the kind of parenting and guidance we
receive from our own caregivers as a young child, impacts the parenting we then
offer to our children and our ‘blind spots’.

P9: My PTSD has adversely affected them yes, it has definitely. I do worry about the
impact that it’s had on my family. I grew up without any hugs and what have
you…what normal families do so I had to learn. I spose we all learn how to be a
parent but I…I had no role models to compare parents to.

P13: Yeah and I can think back [and] exactly the same thing happened to me as a
child (slight laughter) so I’m just repeating my childhood really at times. Though
without the physicality [physical abuse] thankfully. I always thought it was the result
of my childhood and just my conditioning as a marine. I didn’t realise that there were
undercurrents of PTSD there too.

On the one hand, the military provided participants with certain structures
and support akin to a ‘substitute family’ which may mitigate some aspects of their
adverse childhood experiences, however, participants identified that the military also
compounded certain difficulties from their childhood and only constituted a
temporary relief.

P8: …if that’s sort of driven you to join the military in the first place, to find that sort
of package then…then going away and deploying is almost the crack cocaine of the
fun because that’s the bit where you’re all together. It is just about you and the
mates that you trust, so perhaps for many years the military was my temporary
family.
**P13:** My personality wasn’t developed to the way it should’ve been. I was very quiet, very insecure, very withdrawn, but also very mistrustful of authority. So actually, the military was the wrong organisation to join.

**Transitions – “A New Normal”**

This theme describes the continual growth and adjustment required both for the veterans themselves and their families to adapt and respond to ever changing circumstances and the effects of trauma, reaching equilibrium at a ‘new normal’ (P4). These transitions appear necessary to the participants throughout their time in the military and continue to bear relevance upon transitioning back into civilian life upon leaving the Armed Forces. Though transitions were not explicitly acknowledged and spoken about by participants, it became clear that they were linked to veterans making sense of their trauma symptoms.

a) Adjusting back to civilian life

Nine of participants spoke about another key transition point within their military career, the transition from military to civilian life, and the necessary adjustment required to reintegrate into civilian life. The transition from military to civilian life reportedly ranged from irksome to life-changing.

**P3:** I was actually made redundant from the army which in itself was very traumatic because [they] had to lose 20% of their people and I sadly lost my membership of that club…that whole band of brothers thing.

Participants also described how the social support and comradery within the military was challenging to leave behind when re-entering civilian life. Social norms and values stated as key to British Armed Forces such as respect and trust, were similarly found to be absent in civilian life or required complex social and cultural navigations.

**P11:** I miss the comradery, the respect…everything like that, there’s nothing like that in civilian world for me. It’s just all back stabbing and it’s not like that in the military.

**P9:** …when I left the Army there wasn’t any support at all it was just “off you go bye”
Crucially participants spoke of a relationship between leaving the cultural legacy of military life behind, and the support and values it represented, and their trauma symptoms being exacerbated or compounded.

P3: If you look at the shape and structure of the military it’s perfect, you have external threats, you have close friendships, you have common aims and intimate trust. …and then you don’t. When you leave it for whatever reason, you’re on your own, nobody is there to watch your back so one thing I’ve thought long and hard about is actually the trauma of leaving the military and carrying whatever stresses that you have with you, out into an uncaring and disconnected society.

P10: …they [the military] create a bubble of wellbeing to keep you fit but literally when you walk through that gate and the bubble bursts they just shut the gates, put your ID card in [hanging you military ID badge back in] and then you’re gone.

b) Adjusting back to family life

All participants spoke about the challenge of returning home after long periods of time spent away on deployment. This often necessitated an ‘adjustment period’ upon returning home in which the veteran made sense of their family dynamics and how to best reintegrate into their family.

P2: … it’s just that adjustment period when you come back, just to get back into the groove of things and relax and settle down and adjust to that environment. I think after that short period is done you’re back to your usual family dynamic, whatever that may be.

P9: ….it did change family dynamics a bit really, that it was those three and I was some kind of strange interloper…

For others, there was an awareness that the traumatic experiences they had been a part of whilst on deployment had impacted on their style of parenting, and they worried consequently about not being the best role model and father.

P2: I think my tolerance was always down a bit and it took us a while to… get back to being a good Dad again.

P12: …obviously if you’ve seen kids blown up you wanna protect your own don’t you. So when we’re out in town I’m hypersensitive [and] I’ve got my eyes on stalks tryna keep an eye on them, so if you try and talk to me when we’re out I’m just like, yeah whatever cos I’m always tryna look around at the surroundings.
Consequently, several participants described being hesitant to return home at the end of their deployment either because they felt their behaviour would not be understood by their partners or because of the mundaneness of returning back to family life was too challenging. Many veterans talked about dealing with distress by drinking alcohol and this being part of the military culture.

P11: I just didn’t wanna go home, cos I knew if I’d gone home, I’d go out drinking you know and I didn’t wanna go home and start being aggressive over alcohol, and yeah but she didn’t understand that. People have to understand that, you know if you’re put into that situation for six months, that takes a hell of a toll on your brain and your mind, and your whole concept of life. You’re not bothered but when you come back to reality and everything stops then you’re like what the fuck am I gonna do now, and the thing is just to drink.

P7: …the draw to go back was really powerful and it’s exciting and a buzz. It’s like a helicopter at 50 to 100ft banging around with a dozen patients on the back, all of which are really sick and they’re surviving and then you come home to load the dishwasher, it’s really hard.

c) Who am I? “A Different person”

All but one of the participants either noted a dislocation with their own sense of identity, or that others close to them had highlighted this change in their spouse, partner or family member.

P3: From what I am told… after Iraq I was different. I don’t think I had the capacity for self-reflection at the time, to notice things in myself. I just didn’t feel great.

P6: I dunno if I’m just err a different person to what I was

Some participants spoke about differences to their behaviour, in particular aggression or irritability.

P10: …people sort of say “oh…you’ve changed” and sometimes people say you’ve changed for the better, you’re more mature but it wasn’t for the better…it was aggression.

P13: [describing a time his daughter spoke back to him] this time I swore at her and told her fuck off and I couldn’t believe it. I don’t swear in the house and then I just knew I’d gone too far, she must have been petrified.
Whilst others noted a difference within themselves emotionally, and related them to distressing experiences on deployment. These thoughts also created deeper reflections about moral injustices and the struggle between their own values and that of the purpose of the mission and military.

P13: I’m welling up [becoming tearful on the phone] it’s not fair. I think because I’ve seen guys with legs off, I’ve seen headless bodies and such like I was definitely more sadder, a sadder person at how people could do this to other people and also on a wider picture the war was wrong. I spent an awful long time in the military and you actually question why I joined in the first place, so there’s a lot bigger issues but yeah I’m definitely a sadder person so to speak.

Meanwhile, participants frequently spoke of the importance of their masculinity in relation to their military competence, and strength, toughness and self-reliance being key to their sense of identity. While on the one hand embracing their masculine values appeared to fit well whilst in the military given the demands of military life, this led to complications when upon leaving the military through military discharge, the loss of identity and grief at this point was tangible.

P9: I just completely lost my sense of identity and my sense of purpose in life. I know I’m a dad and a husband but really deep down I wasn’t a man anymore or me. I’d used the uniform, my role and my responsibility and excitement to mask everything else.

P12: I see myself as an old-fashioned kind of bloke. I grew up in a deprived area of [home town] where men had to support their families…and now I can’t support my family, I can’t go out to work. So it’s a bit…it’s a…a catch 22. I think my wife would be better off without me cos she married a fit young lad and now I’m not that man…

Disconnectedness

This cluster of themes describes participants references to a sense of sense of distance, isolation and detachment from others which was experienced throughout their military journey. This experience appeared to be heightened by deep-rooted emotional disconnection linked to symptoms of PTSD such as dissociation and numbness.
a) From comrades

Nine participants understood their experience of trauma and disconnection from their comrades, at least partly to be related to their position with the military.

P8: ….if you’re part of a big battalion and it’s set up appropriately then…then there are reasonable support networks but actually in our environment where you’re in very small teams there wasn’t a support network

P13: …you flew there on your own and joined the hospital and you flew back on your own. I was never part of a group, there’s no one to…to lean on and so yeah you’re very isolated.

Some felt that their position as a commissioned officer was protective to their mental health, yet on the other hand those in more specialist roles described feeling disconnected from their comrades and a sense of loneliness.

P4: I am commissioned, officers tend to have a much greater variety of jobs in the military. I wasn’t completely absorbed in those type of scenarios day in day out so for example I never spent six or seven months sat in a compound, shit hole getting shot at wondering whether I was gunna get blown up every day…so I was never saturated in it. I was always able to come out of it and do something completely different straight away and that saturation for some people is probably what compounds the issues and makes more long-term issues.

P7: …I saw people kind of belonging to you know the paras [paratroopers] or the marines. They have this incredible sense of identity. I go out on my own and I come back on my own and the experience of that was profoundly challenging. I’d just landed back home and there were loads of soldiers all in the same unit and three buses came and picked them up, and I’m standing in the same place… all of them shook my hand as they knew I was an [military role] and it was hugely kind of positive and then this moment when the buses pulled away… of me stood there like a lemon on my own and the hire car had not been booked and nobody knew I was coming home and I got on a train and went back to [home town]…and… I had to wrap up my weapon in black bin bags and hide it under the train seat. That whole belonging that you get when you’re out there but you don’t get when you’re home.

b) From civilian life

Eight participants revealed experiencing a disconnect between them and society linked to cultural differences. They described this sense of difference from others and spoke of not feeling like they ‘fitted in’ or not feeling understood by others.
P3: …it absolutely can polarise erm…and deepen divisions between people who have that common experience and those who don’t.

P12: I don’t think I fit into society today cos everything is all “well let’s mosie on around things and get nothing done” (says in an accent). Whereas it’s easier to say “yep I’ll do it, let’s go and do it”.

Int. How does that leave you feeling?

P12: Lonely, isolated, outcast…erm not right

Consequently, this sense of difference appeared to contribute to further difficulties and participants spoke about using alcohol as a means to cope or disconnect further from unsettling emotions.

P11: …there wasn’t any of that mental health, it was.. it was a stiff upper lip…it was you know you’re in the army now son [after joining the army] and you have to suck it up and get fucking wasted and…that’s…that’s how you deal with it. And so I did that…I did that…I got smashed for five days and then after five days the rest of the lads came for rest and recuperation and yeah I was just a jumbled drunken mess….and unfortunately that was my mind set from that point onwards, was don’t care, not bothered, anything bad happens just drink, move on.

c) From family

A sense of distance was also noted from family and friends in eight participants which led them to question their role and importance to the family unit.

P3: …you feel less part of the family, you feel more peripheral to something you were central to. And you know a true collaboration becomes more of a coalition, you’re there to fulfil a specific role and you feel that your part in that has become you know provider and enabler rather than a true participant.

They understood their detachment as being directly related to their military-related trauma, contributing to a turbulent and challenging inner life evident through a lack of impulse control, emotional unavailability or lack of interest and motivation in activities. These experiences overlaid upon their experience of ‘normal life’ thus affecting their ability to engage, be present in their relationships with family and ultimately their sense of personal identity.
P7: [describing a day out with his family] I just have this vision of being 10 metres behind them. If we did stop anywhere and I caught up, I’m thinking… everything has an association with something to do with Afghanistan or how I’m feeling… and I’m constantly thinking about that you know a helicopter flying over, even the noises of vehicles, everything had an association so I’m not there… I’m just tagging along, then those feelings of worthlessness and fear were compounded by the fact that I’m a shit dad and a shit husband, this vicious circle… a day out with the family I might as well have not been there….

P5: [describing being in out in the UK with his family but seeing someone who reminded him of a previous deployment]…a guy wearing a combat jacket and he had black hair and he basically looked like a Serb soldier and I just wanted to go over and punch his fucking face in… I just… I wasn't going to but I started sort of trembling with anger and I just said to [his wife] …I'll explain afterwards I'll text ya and I just went and sat in the park and sort of breathed deeply and texted her what the issue was. And they [his children] were like “where’s Dad gone”… he’s either gone to beat some random stranger up or have a sit down somewhere (laughs) …but yeah so the rationale for… for separating myself from everyone is I’m either gunna burst into tears or start shouting and yelling. But it does cross my mind, not infrequently… you know when you’re out with them [his children] and playing if something around is a visual trigger for ‘oh that looks a bit like Bosnia’… I might have a moment where I sort of briefly visualise it all… a smoking room with bodies strewn around and like the children in there crying cos everyone’s been killed.

d) From one’s self

Eleven participants noted their own sense of disconnectedness as a direct consequence of their trauma related symptoms such as dissociation or emotional numbness.

P7: …erm you know kind of hypervigilant, angry, erm then numb and weird and finding myself in a corner of a room and not knowing how I got there. That kind of stuff. And then after my second tour some really strange things started happening. I started seeing things that weren’t there.

P5: …[describing a traumatic experience on a deployment] urm so the female bodies had been, they’d had their faces cut up, you know the mouths cut open so they didn’t have lips. That sort of… god who would even think of doing that. About 10, 15 of them and I had these sort of visual disturbances [PTSD reliving symptoms]. It still happens a little bit, every now and then I’d be talking, walking down the street, talking like we are now and my mind would put one of those faces on, never on a young girl, never on an old woman but women in their twenties or thirties… I’d see them as sort of mutilated faces… it was absolutely horrible.
P9: For some reason all I could think about...all I could smell was blood...and I get really angry about it. I don't take it out on people but I feel confused and flummoxed and my emotions are all over the shop. And I feel stupid and embarrassed as well...cos I know that I'm not there...I know that...and also I know that there's nothing that I can do about that particular problem. Erm but the injustice and the waste of it and the inhumanity and the cruelty....and the horror of it....erm just comes flooding back to me.

These experiences undeniably compounded their pre-existing sense of isolation from their family and ability to be present in familial interactions, thus making integrating back into civilian life extremely challenging.

**Family Functioning**

This theme refers to the relevance of the military experiences for all the relationships within the family. Some referred to the closeness of their family units whilst others noted spousal discord and changes to their relationship dynamics occurring as a result of military experiences. Two participants were single and three had remarried, and for all these veterans they cited marital discord related in part to their military service.

a) **Separation from wider social network**

Seven participants said that they had withdrawn from their social network, and some made an association between their withdrawal and PTSD symptoms. For example, participants' military-trauma affected their desire to protect their family and keep them 'safe', or simply their PTSD led to patterns of avoidance behaviour.

P13: ...cos I was out all the time and...or wanted to be at the centre of everything, didn't wanna miss everything and I liked going out in big groups, now I'm completely the opposite.

P12: You know I think personally I'd shown signs of PTSD cos I don't like going where there's lots of people. Urm...so I try to keep my family safe more, I try to keep us more insular. I don't want us to go out and meet lots of people...and...I'd rather have film nights and keep them close. Keep them safe.

P6: ...so I mean we've got quite a close knit family but we've always had a close circle of friends....but we wouldn't go out and for that 18 month period... I didn't see anyone.
**b) Closest relationships suffer**

Eleven participants reported difficulties in their intimate relationships for a host of reasons such as long-term separation on deployment, lack of emotional availability and changes to relationship dynamics.

_P2:_ It [the military] takes so much from you…you know physically, mentally and from your relationship.

_P9:_ I was getting increasingly irritable, angry, frustrated, tired, not sleeping very well, feeling trapped, feeling controlled by my wife, bossed around…

_P3:_ …neither of us [participant and ex-wife] were in a position for quite a long time to…to be there for each other and so there was a real downward self-reinforcing spiral between the two of us for quite a long period of time we just weren’t there for each other. We ceased to communicate in a meaningful way. There was absolutely nothing physical between us for years…many years……I’m not just talking about sex, I’m talking about just being physically and compassionately there for one another… it just didn’t exist.

_P7:_ there was about 18 months where you know we [participant and his wife] were on the edge of me leaving…of things not at all good.

**c) “Supermum”**

Nine participants spoke about their partner’s strength, determination and resilience. Their partners were required to take on additional roles and responsibilities during the participant’s deployments, which some could protect them from worrying about their partner’s safety.

_P1:_ If you met my wife you’d think she was in the Army and not me (slight laughter). You know she had everything pretty well handled, even heavily pregnant, she doesn’t stop she’s just…she’s a whirlwind…thousand miles an hour….so she had it pretty well taken care of and I think that kept her busy and kept her mind occupied and away from panicking….  

Some spoke about their partner’s tolerance towards their distress and trauma symptoms as crucial to the survival and maintenance of their relationship.

_P6:_ And she’s the one that kept that all together, she was just incredible…she’s still being….supermum and incredibly tolerant of my awful behaviour which I thought was everybody else and her but in fact I was a changed bloke. But I think again my wife’s resilience and her ability to manage and deal with that…her tolerance of me
doing things like going sailing was really important cos I think if I’d of stayed in the house and had no purpose and n...nothing then I think we would have...we would have been a split up family...

At the same time, participants found renegotiating and redefining roles and responsibilities upon returning home challenging, given that it had been necessary for their spouse to adopt greater control and independence within the household and this could leave them questioning their role within the new family dynamic and feeling unwanted.

P3: I’m not like one of those stereotypical blokes who comes back and says “right take your overalls off put your pinnie back on, wars over get back behind the cooker”. Certainly I think on reflection there were things that urked me in terms of decision making ...what colour the living rooms guna be painted or where we were guna go on holiday, that were made without any kind of reference to me....(long pause).

P9: [after coming back from a deployment and experiencing severe depression] but it definitely changed dynamics in that [wife] became far more the parent and I effectively became a third child or treated as such even by the boys to a certain extent...you know I only really got involved backing [wife] up if they were naughty but then I...then I’d probably overdo it. She would then....she would then erm...take the boys side over me and I would feel really isolated and alone and betrayed....

d) Father-child relationship

All participants spoke about their relationship with their child or children, in particular, either that their relationship had grown closer as a result of their military experiences or that their relationship had been strained as a result of their own trauma symptoms. For those who had developed a stronger relationship with their children as a result of their military experiences, they conveyed a sense of needing to make up for ‘lost time’ and the impact this has had on their parenting style.

P7: .... the time I lost with my children is the only thing that I regret but I’m acutely aware of that now, and I go 100 miles an hour now. I feel like today is the most important day and my children are the most important thing. I go completely over the top now. I’m closer to my children than I think I’ve ever been, in fact last night I rang all of my children just...just to tell them I love them and then put the phone down.

P5: ...but I look at them [and experience an] overwhelming feeling of love and cherishing for them [children]. I don’t know how much that’s affected by having seen
people who’ve had their children shot or people that are refugees and putting myself in their shoes.

P12: …erm cos I think to be honest with you she’s probably my best friend, my 12-year old…

Two participants spoke about the more direct effects of their PTSD, more specifically extreme alertness, affected their interactions with their children and impacted on these crucial parent-child relationships.

P8: [talking about picking his child up from school]…any opportunity you had for engagement and to mess around then you did do but there was…but there was….there was never routine there for her. One minute you’re…you’re very positive and then actually once you’re in the car and then you’re concentrating like you might be if you were deployed….you’re then….long pause)….less….less of the person that they…that they were hoping that you’d be when you picked them up.

P9: I do overreact, particularly with my eldest son I really clash with him and I do really overreact sometimes….

e) Young caregiver

Ten participants also noted their children taking on additional roles and responsibilities within the family system, to compensate for their father being away on deployment and support the military spouse.

P7: [name of son] became the Dad of the house. He matured very, very quickly and took on responsibilities, particularly of being there for [my wife] and they are incredibly close. They are as thick as thieves now, they ring each other every day. [name of son] remembers almost me projecting [that] you’re the man of the house now mate and he was only very little. And then when I come home he’s…he’s kind of tip toeing around me and looking after his Mum.

Moreover, participants spoke about their children being highly attuned to their emotional wellbeing and often adopting additional responsibilities of caring and supporting their veteran father.

P13: Yeah, yeah…and she’s very good at that. She’ll come up and give me a big hug and say yeah daddy that’s fine…so she’s kind of like motherly (laughs) even though she’s thirteen.

P12: Urm…she knows when I’m down
P9: ….they’re great, if they see I’m down or whatever they’ll come and sit and give me a cuddle or whatever or…. ask if I wanna go and do something. He [his son] has perhaps made more of an effort on my behalf than I would want him to you know…you can see he’s making a special effort to look after me because it’s back when I was having really bad times when I was properly unwell.

**Personal growth**

Participants frequently made sense of the personal impact of their trauma as having contributed to their own personal growth. Their narratives were often poignant and moving, and more often than not participants downplayed the incredible strength, bravery and determination they had shown. Thus, sub-themes reflected descriptions of survival and resilience, demonstrated by participants and their offspring, both during combat and afterwards, as well as the new-found psychological understanding they had come to develop, often through professional treatment and support. Moreover, not only is the overlay of their PTSD symptoms on their everyday life apparent but so too is the contrast of existential thoughts regarding death alongside family life requiring parenting abilities such as emotional attunement and nurturing skills.

*a) Adaptability & resilience*

All participants described stories of strength, determination and self-discipline. Some described this more explicitly whilst others were more self-effacing. This set of skills was both necessary during combat situations and on deployment, but also upon returning home and managing their trauma.

*P9: I’m really soft and I’m good at talking to relatives and families and I’m good at talking people down with mental health problems and being sympathetic…but actually I am actually really good at killing people… and I’m really good at extreme violence, up very close and personal and the deployments taught me that as well. You know I accept it happened and I did all those things and its part of me but not to look at it too closely anymore. Not to relive it every day but to focus…focus on the here and now and the future.*
Accepting and come to terms with one’s own actions in combat situations, as well taking pride in their own accomplishments also formed an integral part of this internal strength and resilience.

P9: …but I’m really proud of the fact that I’ve dealt with some of the worst that humanity has to offer. I feel like I’ve had a really privileged look into the human psyche as well.

P4: I think it’s made me a better person because I’ve had to actually deal with emotion that is not something I’m overly good at. I always have been this sort of quite black and white, you know I’ve never cried at a funeral for example. What it does is it makes me a lot more tolerant of people who are affected by emotion a lot more i.e. my children, my wife, my mum, my dad.

Not only were veterans themselves adaptive and resilient but this was also apparent within military families and their children. Veterans often felt this was as a direct consequence of being part of a military family. Interestingly, it tended to be those children with low scores on the SDQ, indicating “close to average” functioning, who’s fathers reported their children as resilient and well-balanced.

P7: …I am where I am now because of those things so I’m really happy that I almost wouldn’t change my experiences. I probably wouldn’t change being unwell and the impact on the children. It built resilience in my children, it built resilience in our family, we are stronger than we’ve ever been and you know it’s very positive…

b) Developing a new awareness

Eleven participants came to develop a new understanding and relationship with their PTSD. Time and distance from the deployment was often necessary for this to take place. Others described this process of “self-reflection” being prompted by engagement with support and treatment services. They appeared to provide the scaffolding to support the veteran to inwardly reflect and make meaning of past experiences, whilst recognising their relationship to current functioning.

P5: So yeah, I probably do think differently now cos of reflection and talking to people. It’s possible cos I reflect a little bit more on things, that maybe isn’t as much of an issue for me….
P7: .... having that treatment and kind of almost packaging everything a little neater in my head, and then over time things...the....the unwanted things stopped happening or at least didn't happen...you know they weren't as intrusive and they were manageable. I then had a period of reflecting on my behaviours and what that must have been for my family.

Others spoke about the importance of self-help in their journey to making meaning from their past experiences, and learning strategies to manage in the present.

P1: ... I had a couple of years where they were pretty tough and I went out and bought a few books. I spoke to a few guys down in the States, and that really helped me out in kind of prioritising things and stressing over things I can’t control. That put me in a better position to deal with things in my mind....

P13: ...I’ve read self-help books, there was one about, cos I was a child of an alcoholic, how I react and it’s probably quite similar to PTSD. So I knew I had quite a low threshold for staying calm and erm being aggressive. I understand how that happens now...

Developing this new awareness, not only impacted on the veteran’s understanding of their trauma but more broadly on their understanding of how it affected their parenting, and that certain triggering situations might force them to relieve memories and feelings from their own past experiences which are not caused by their children.

P2: ...you know for me if I get a bit cross with the kids I’m like right is it actually them or is it me being in a bad mood and transferring. So, I think the education for me in being able to self-assess, be completely objective is the really important bit....certainly, that has worked well for me. Then you’re like well actually it might not be, it might be me internally and projecting or transferring that which is very easy to do.

4. Discussion

4.1 Veteran Trauma, Childhood Functioning and Reflective Functioning

We found a moderate and significant positive correlation between PTSD symptoms and uncertainty about mental states. Furthermore, there was a was moderate and significant negative correlation between PTSD symptoms and
certainty about mental states. Higher scores on the IES-R were associated with reduced certainty about mental states, indicating the presence of overinterpretation or overattribution of intentions or mental states to self and others (hypermentalising).

These results extend non-military literature whereby problems in mentalising arise in the context of increased arousal (Fonagy & Bateman, 2006) such as PTSD. Impairments in mentalising are hypothesised to cause difficulties for the veterans which are twofold. Hypermentalising might result in the veteran interpreting ambiguous situations as threatening given their sensitivity to social cues, thus reactivating memories about previous traumatic experiences and resulting in further emotional dysregulation (Sharp & Vanwoerden, 2015). Conversely, hypomentalising, whereby the veteran functions at the level of psychic equivalence may result in concrete, deterministic thinking (Fonagy, 1995), hence why re-experiencing of trauma-related thoughts, images, emotions or sensations are then not connected to their pre-existing origin and instead perceived as an active threat.

Secondly, a moderate and significant positive correlation was also found between PTSD symptoms and child functioning scores. Thereby suggesting that as the severity of the fathers’ trauma symptoms increased, so too did their ratings of their child’s functioning, and crucially elevated scores on the SDQ were indicative of worsened emotional and behavioural functioning.

Previous research with non-military samples also found a relationship between paternal PTSD and child functioning (Allen et al., 2010; Lester et al., 2010; Lester et al., 2016; Khaylis et al., 2011; Sayers et al., 2009) and PRF and child functioning (Camoirano, 2017; Fonagy et al., 1998; Fonagy et al., 2002). Similarly, Sullivan and colleagues (2016) found that increases in veteran father’s PTSD symptoms were associated with increased concerns about their child’s functioning, such as difficulties with behaviour, peer relationships, emotional and physical problems.
In line with expectations, both PTSD symptoms and uncertainty about mental states were found to independently predict child functioning and their predictive strength of child functioning scores was large (Cohen, 1992). These findings would imply that veteran PTSD and mentalising ability, specifically hypomentalising whereby the individual functions at the level of psychic equivalence and mental states are experienced concretely, are able to predict the functioning of their child. Finally, uncertainty about mental states did indeed partially mediate the relationship between PTSD symptoms and their child’s functioning. There were significant total and indirect effects of PTSD symptoms on child functioning with uncertainty about mental states entered as the mediating variable. These findings suggest that the father’s PTSD symptoms may influence their child’s wellbeing as mediated through reflective functioning.

The finding that the relationship between PTSD symptoms and child functioning was partially mediated by mentalisation extends the findings of previous research. Compromises to PRF have been associated with increased severity of the child’s emotional and behavioural difficulties (Suardi et al., 2018). Moreover, parental psychopathology, namely experiences of trauma, which disrupt emotional regulation can also impede the capacity to mentalise (Fonagy & Luyten, 2009; Schechter et al., 2010). The present study highlights the need to consider deficits in hypomentalising when examining the effects of military-related trauma on subsequent child functioning and wellbeing.

4.2 Transgenerational impact of PTSD

Further to quantitative findings, interviews also revealed that some of the veteran fathers were apprehensive about the intergenerational nature of PTSD, both from their own childhood trauma but also from combat-related experiences. For five participants there was an awareness of this ripple effect impacting on their parenting in ways which were similar to how they were parented such as the use of violence.
Similarly, veterans described their children’s difficulties at school and home, with a number of children in receipt of mental health support. Even for those who considered their children to either be too young or sheltered from the immediate effects of their PTSD, there were concerns about the longer-term effects of PTSD on their children, given its ability to ‘seep in’ to family life.

4.3 Military Family Life, Identity and Roles

The themes drawn from the qualitative data serve to provide further insight into how veterans made sense of their trauma symptoms and understood the impact on their family. To reiterate, an *a priori* coding framework based on mentalising theory was intentionally not used during the interview process. The first major theme, *Transitions – “A new normal”*, refers to the series of transitions veterans must navigate upon returning from deployment in order to reintegrate into civilian and family life. Being away from the support and camaraderie of the military, and renegotiating their role within the family unit following a prolonged period of time away, in addition to experiences of distress and PTSD was challenging for veterans. Previous research echoes these difficulties with reintegration into the community (Doyle & Peterson, 2005). Further, veterans reported changes to their sense of identity as a result of experiences on deployment. Interestingly differences to their behaviour, resulting from PTSD, were often noted by family members and not the veteran themselves.

The *disconnectedness* theme builds another layer of understanding and refers to the sense of detachment and emotional disconnect present across all of the veteran’s relationships, including in their relationship with themselves. These experiences were closely intertwined with their PTSD symptoms since for example emotional avoidance further perpetuated this sense of distance in their relationships. Moreover, dissociation and alterations to the veterans’ sense of self was evident on a continuum and helps to further explain changes to veterans’ sense of identity.
Furthermore, aggression and lack of control, emotional unavailability and hypervigilance all served to compound a sense of isolation from their family. The subsequent impact on family life was profound and far-reaching. In sum, veterans’ internal experiences and difficult inner life overlaid upon their experience of trying to participate in ‘normal family life’ affected their sense of identity and relationships with their family. Deficits in mentalising might compound PTSD symptoms leaving the veteran struggling to make sense of their trauma-related memories and emotions, thus contributing to further emotional arousal and acting in a manner that others either do not understand or keeps them at a physical or emotional distance (Adshead et al., 2013). Their children’s negative emotions may also trigger difficult emotions for the veteran linked to their combat experiences (Dayton, 2006). Consequently, leading to further social isolation within their interpersonal relationships in the family unit, and more broadly altering the bumpy landing back into civilian life and reintegration. The potentially triggering nature of the child’s emotions has been explored within families whereby at least one of the parents is an alcoholic (Dayton, 2006), however, has not been considered in a military context previously.

The veteran’s sense of disconnection may be made sense of from a mentalising perspective, since identity diffusion (Erikson, 1956) has been linked to impairments in mentalising (Fonagy & Target, 1997). This may help to explain why veterans later went on to report interpersonal problems in the subsequent disconnectedness theme which also impacted on family functioning. Given that research has suggested that mentalising difficulties and identity diffusion were strongly correlated to interpersonal difficulties (De Meulemeester et al., 2017). Taken together, difficulties understanding oneself and others in terms of intentional mental states may be related to veterans’ compromised self-identity and self-coherence which in turn affects the quality and strength of their interpersonal relationships (Bargh, 2014).
The *military family membership* and *family functioning* themes highlighted the importance of the military presence for the whole family as veterans’ military experiences shaped family narratives as well as roles, identities, relationships and parenting. PTSD had a pervasive effect on many facets of family life and varying levels of relational discord were noted. Over the course of lengthy deployments different family members adopted different roles and identities to fill the loss of the military parent. This is in line with previous research, which refers to spouses as the “keystone, the central family member upon which the family and its well-being depend” (Green, Nurius & Lester, 2013, p.753). Similarly, children often took on additional responsibilities as a result of their fathers either being away or supported their fathers upon return with their emotional distress. Clinically this is of importance as previous research has found an association between parentification and increased internalising behaviours (Van Loon et al., 2015).

Bronfenbrenner’s Ecological Systems Theory may be useful in making further sense of the above themes and interactions between the veteran, their family, comrades and community, and wider social and political structures (Bronfenbrenner, 1977). The veteran does not live within a vacuum, and this model considers how the interactions between the different layers, mentalising or non-mentalising systems, can contribute and maintain the individual’s PTSD response, as it assumes that interactions are bidirectional. It may also contribute to veterans’ resilience which the *personal growth* theme refers to. The ecological map and context for each veteran will be different thus shaping the individual’s response and recovery from PTSD (Harvey, 2007) which we know in turn affects their mentalising ability.

These ideas overlap with ideas about mentalisation, in which family and community, wider environment and broader sociocultural context are thought to influence the development of mentalisation (Luyten et al., 2020). Furthermore, mentalisation ability fluctuates and is thought to be influenced by interactions and
relationships with others, and shaped by others’ capacity to mentalise. In sum, the
capacity for PRF, appears to be embedded more broadly in context and
environment and affected by relationships (Luyten et al., 2020). This adds depth to
our understanding of the quantitative findings, suggesting a more nuanced
understanding is necessary. Instead, there is an understanding that different layers
and strands of context, interpersonal relationships and narratives interact and shape
the veterans’ PTSD symptoms, experience of reintegration and mentalising ability in
turn affecting their children.

4.4 Evaluation of the Study and Research Implications

Using a mixed-methods design enabled a more in-depth and comprehensive
evaluation of the effects of trauma in veteran fathers on their family and is to the
author’s knowledge the first to investigate this phenomenon in such a way. Meta-
methods are increasingly popular and can provide a rich level of complementary
data when studying a complex phenomenon (Hughes, 2016). In this case, a more
detailed evaluation from the participant’s perspective was possible given the
research design. Finally, in order to ensure rigor in the qualitative data and that the
identified themes closely aligned with participant experience; credibility checks were
drawn upon (Elliott, Fischer & Rennie, 1999).

Naturally some limitations apply for both phase one and two. Time
constraints dictated recruitment strategies and thus impacted the ultimate sample
size. Nevertheless, we still detected a moderate effect size. Due to recruitment
difficulties and attrition, the sampling strategy was broadened to include snowballing
sampling and additional third sector organisations, many of whom were providing
support to veterans for their difficulties. Hence introducing this method may have led
to an over-representation of participants sharing similar characteristics (Magnani et
al., 2005). It was not possible to recruit the required sample size according to our
power calculation and therefore caution should be exercised when interpreting the findings.

A purposive sampling strategy was implemented, and required participants to self-identify as a “veteran”. Yet, the definition of this term is not ubiquitous, and can signify different things to different people (Dandeker et al., 2006). In fact, further research suggests a much more nuanced understanding of this term and in a telephone interview of UK Armed Forces personnel, all of whom had left the military, only half considered themselves to be a veteran (Burdett et al., 2012). Similarly, a number of participants stated that they would not refer to themselves as a “veteran”, during the phase 2 qualitative interviews, as they do not align their personal identities with this definition. Burdett and colleagues (2012) suggest that those who self-identified as a veteran were less likely to have served as a reservist and were more likely to be less well educated. This problem regarding the conceptualisation of the term may be twofold: it may explain in part the challenge with recruitment but also limit the generalisability of these results.

While the use of the internet for survey research provides access to often difficult to reach populations, and allows for participants, particularly from stigmatised groups, to provide valuable information in a confidential manner, it does, however, pose other challenges (Ballard, Cardwell & Young, 2019). One of those encountered in this study was the interest by potentially fraudulent participants. This poses a threat to data integrity. We believe we successfully identified those fraudulent participants through the similarity in duplicate emails and their data was subsequently removed. However, given that internet technology is increasingly being used to address research questions it will be important in future research to utilise approaches which prevent and detect fraud more systematically.

Further limitations that should be noted in phase one relate to the use of self-report measures which are subject to bias (Stone et al., 1999). Crucially, child outcomes were assessed based on their father’s report, therefore, we could
reasonably expect their report of their child’s functioning to vary systematically according to their own symptoms. It is possible that cognitive biases associated with PTSD affected the father’s perception of their child’s behaviour (Harkness, 1993). For instance, attentional biases towards threat, associated with PTSD and co-morbid disorders such as depression, may influence the parent’s perception of their child’s behaviour as more negative (Creech & Misca, 2017). There are further implications of asking veteran fathers to complete outcome measures on their child’s functioning. In particular, fathers’ mentalising ability or their own mental health difficulties may cause them to misinterpret their child’s functioning or may vary systematically accordingly. As such we recognise that this reflects the father’s perception of their child’s functioning rather than their actual functioning. Future studies may wish to utilise an independent index of functioning, for example using other informants such as veterans’ partners, which would reduce the impact of correlations between such measures.

Constructs such as mentalising may present additional challenges when it comes to developing an accurate self-report scale, given that the capacity is thought to occur at a more implicit or automatic level (Fonagy et al., 2016).

There were also a number of limitations related to the study design and analysis of phase one. Finally, a cross-sectional approach was used whereby questionnaires were administered at a single time point. Causal implications are therefore limited, due to the mediator and outcome variables being measured concurrently (Robins & Greenland, 1992). Future studies may wish to utilise a prospective longitudinal design to establish temporal precedence.

It was beyond the scope of this study to control for additional confounding variables which may influence the association between veteran trauma and offspring functioning. For example, past childhood adversity in veterans is known to link to subsequent mental health difficulties in veterans such as PTSD (Murphy & Turgoose, 2019) or potentially protective factors such as the supportiveness of
veteran partners which may mitigate the effects of veteran trauma. It may also be of interest to consider the length of time since leaving the military and to understand whether that has any bearing on improvements to mentalising capacity using a longitudinal design. Furthermore, combat exposure was not directly measured due to concerns regarding participant fatigue or premature termination of study participation (Whelan, 2008). In addition, only one of the veterans’ children was considered in this study and it would therefore be of interest to consider the relationship between veteran trauma and child functioning in families where there is more than one child. Future research could seek to understand how these variables might mediate the relationship noted.

In phase two, the majority of interviews took place over the telephone, with the exception of one, and it is possible that the context in which the interview was conducted impacted on how they responded. There is the potential that veterans may have responded in a more socially desirable way based on the context they were in, for example being concerned about being overheard by family members affecting their interview answers. On the other hand, we also felt that participants may find it easier to open up over the telephone which is why participants were given a choice about the location of the interview. In addition, during the interviews, participants were asked to retrospectively recall complex emotional reactions, cognitions and memories, and for some these had occurred many years previously depending on when they had left the Armed Forces. The length of time since they left the military and circumstances surrounding this ending is likely to have influenced their interview narratives. Moreover, some participants spontaneously reported the use of psychotropic medication which has the potential to negatively impact on cognitive functioning (Stilley et al., 2010), thus potentially impairing on their capacity to recall.

More broadly, as for the qualitative research questions, the second question ‘How they understand the wider impact of their trauma within their family system’
was particularly broad. Military families face unique set of challenges which include familial separation related to lengthy deployments, the stress of potential and actual veteran injuries and frequent relocations and dislocations to social networks. It is important to acknowledge that it may have therefore been challenging to disentangle the complexities and fabric of military life from the impact of trauma.

With regards to the choice of qualitative data analysis, Thematic Analysis was selected in part due to its flexibility in acquiring and understanding rich qualitative data. It was also not our intention to develop a new theory as with Grounded Theory and due to the infancy of research within this field it was felt that this approach would be better suited than Interpretative Phenomenological Analysis to draw out general themes across participants, rather than describing each individual veteran’s idiosyncratic experiences.

It is important to hold in mind that the Armed Forces are a heterogeneous group, as such the occupational demands and risks inherent across the different sectors and roles vary. There is a risk of oversimplification (DeVries & Wijnans, 2013). Future research might fruitfully investigate whether the results of this study can be generalised more broadly across the military, for example in female veterans and actively serving personnel.

Despite its limitations, the study provides a novel and worthwhile contribution to the field. These findings also have the capacity to inform future research and clinical practice.

4.5 Clinical Implications

Whilst improving health services for veteran personnel has been an increasing priority for the government and health services, these findings serve to highlight the importance of adopting a trauma-informed approach to working with military veterans. Taken from a clinical perspective, these results invite clinicians to
seriously consider and hold in mind the impact of the veteran’s PTSD on the wider family system.

This study provides initial support for the hypothesis that impaired paternal mentalising ability is a potential pathway through which paternal PTSD symptoms affects the severity of their child’s emotional and behavioural difficulties. While more research is necessary to reach causal conclusions regarding the possible pathogenic role of impaired mentalising in a military population, existing research suggests that RF lays the foundations for the development of the child’s social, cognitive and psychological domains (Swain et al., 2014). It may, therefore, be worthwhile to target both paternal and maternal mentalising ability as a means of clinical intervention for improving the child’s emotional and behavioural outcome. For example, focusing on supporting the veteran fathers to develop more complex ways of understanding both their own mental state as well as their child’s and to move away from concrete deterministic thinking patterns (Slade, 2005). This may also serve to increase their sense of self-coherence (De Meulemeester et al., 2017), improve their interpersonal functioning connection thus help them to establish more meaningful relationships with others upon return from deployment or on integrating back into civilian life.

To date, a number of interventions have been developed which to aim to enhance PRF, improve the parent-child relationship and to decrease the risk of intergenerational transmission of psychopathology (Baradon et al., 2008; Goyette-Ewing et al., 2003; Nijssens, Luyten & Bales, 2012; Slade, 2005; Suchman et al., 2011; 2012). Such treatments tailored to fathers might include reflective parenting groups, such as ‘Mind the Dad’ delivered at the Anna Freud Centre or Adaptive Mentalisation-Based Integrative Treatment (AMBIT) which applies mentalisation-based treatment (MBT) to complex whole-systems (Bevington et al., 2017). It is unclear at this stage whether groups would be better received if they were delivered solely to military personnel. Alternatively, a military-wide mentalisation-based
preventative intervention programme at the system level may be appropriate, which promotes the development of PRF. Further research is necessary to determine the optimum time in which to deliver such interventions in relation to the veteran’s recovery from active PTSD symptoms.

Growing up with a parent who has chronic symptoms of PTSD has negative repercussions for their children. As such, early detection and intervention for those children deemed ‘high risk’ of developing psychopathology is key (Dekel & Monson, 2010). This is made more challenging due to the fact that it can often take a significant amount for the veteran to access an intervention for PTSD, on average eleven years (Murphy & Busuttil, 2015). While the findings from this study would suggest that reducing the veterans’ PTSD symptoms is of utmost importance, through targeted trauma-focused interventions, it is possible that stigma and lack of trust in providers act as barriers access (Zinzow et al., 2013). It is possible that interventions aimed at enhancing PRF may be less resource and time intensive, and better received by the military population, and therefore might be able to be delivered in a more timely manner.

Clinically, it may also be important to monitor the potential parentification of children, who assume adult roles and responsibilities, in response to the deployment of their parent or the development of parental PTSD. This may be particularly pertinent if the extended family do not live close by as a result of frequent relocations, and therefore the children may be more likely to adopt these roles. While the role of a “young carer” is not devoid of positive consequences for them and their families, it is important to hold in mind that there are a number of potential negative outcomes if they are left unsupported in these roles. For example, research has found an association between parentification and increased internalising problems (VanLoon et al., 2015). As such, there is a need to recognise and support these young carers with signposting and individually tailored support.
5. References


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Part 3: Critical Appraisal
1. Introduction

This critical appraisal will provide a platform from which to reflect upon some of the practical, methodological and conceptual issues I encountered during this research process. Three key areas will be considered including my personal interest and motivation for the project, reflections on the literature review and challenges encountered in conducting and analysing data in the empirical paper. I will seek to offer suggestions for how these might be considered or approached in future research.

1.1 Motivation

My involvement with this research project, specifically with a military population, was motivated by two key drivers. Firstly, a desire to conduct clinically relevant research within a context that was receiving valuable media attention was of great excitement, particularly given that the political spotlight was increasingly being shone on veteran wellbeing, epitomised by the development of the new government Office for Veterans’ Affairs. Secondly, I had seen first-hand the value of adopting a trauma-informed approach to care through experiences on training. Trauma Informed Care (TIC) involves recognising the wide-ranging impact trauma and the multiple layers through which it can affect one’s mental and physical well-being and relationships with others (Butler, Critelli & Rinfrette, 2011). Crucially this understanding can be used to develop more appropriate services and support that are better equipped, reduce the potential for retraumatisation or exacerbation of symptoms and highlight an individual’s strength and resilience as opposed to pathologising. I felt this research had the potential to enhance both the profession’s and the general public’s understanding of how combat trauma presents within military families thus reduce the possibility for these mental health symptoms to be misinterpreted, increasing the likelihood of more helpful responses.
2. Reflections on the Literature Review

The literature highlighted that while a great deal of research had been conducted on the intergenerational transmission of psychopathology in the general population, research within the military was scant, particularly around the impact on children of their father’s trauma. As such it was often necessary to infer the potential implications for military families which I personally found surprising given that the relationship between maternal mental health and child psychopathology was well established (Cummings & Davis, 1994). Moreover, it has been over twenty years since the construct of mentalisation was coined by Fonagy and colleagues (Fonagy et al., 1991). While it was not until more recently that the Reflective Functioning Questionnaire (RFQ; Fonagy et al., 2016) was developed which provided a measure for mentalising that could be calculated more quickly and easily than was previously possible, I was surprised that the literature around mentalisation within the military was virtually non-existent. Particularly since the capacity to mentalise is associated with exposure to trauma (Fonagy et al., 1996) and anecdotal accounts from the qualitative interviews led me to hypothesise that military training may inadvertently reduce one’s capacity to mentalise. I supposed that when in the midst of enemy contact, a more rapid thought process and response than occurs with mentalisation, may aid survival.

Throughout this research process, I often wondered whether cultivating an attitude of curiosity about oneself and others’ mental states required the individual to be a position where they feel a general level of safety both physically and psychologically, something that you do not have the luxury of in a volatile combat zone. This led me to question whether we as researchers might shy away from conducting research into socially sensitive areas, for fear of the ethical and moral dilemmas that might arise as a consequence of the research (Siber & Stanley, 1988). Suppose a study’s findings were to suggest that military training suppresses
an individual's reflective functioning capacity, this is likely to have implications not only for military personnel and veterans, but also their families, policy makers and more broadly the political agenda and public health. While I raise more questions than answers, I appreciate arriving at this new understanding as it highlights the complexities of conducting research within the systems we operate and the need to conduct research sensitively due to the potential ramifications arising from findings. Nevertheless, Clinical Psychologists may be well placed to conduct such research and reflect on such ethical dilemmas due to their core competencies as both a scientist and a reflective practitioner (Thompson & Russo, 2012).

I have come to appreciate that both society and Clinical Psychologists have an ethical and moral obligation to understand the burden placed upon and carried by those individuals we rely upon to protect us. The Armed Forces take on this responsibility, often at great expense to themselves and their families, facing danger and accepting sacrifices, and in the worst cases suffering significant injury or death as a result of their role. It is, therefore, imperative to continue to develop our understanding of the most effective ways to support and treat these individuals and their families. I also wonder whether my role as a trainee Clinical Psychologist with no direct clinical experience with this population enabled and encouraged me to approach the research with increased curiosity and fewer preconceptions, compared to if I was working as a qualified Clinical Psychologist in this field.

2.1 Limitations of the literature

I was struck by the contrasting findings which arose from a close inspection of the literature and the lack of consensus. This was found to be the case when examining the prevalence of psychopathology within the military. Some studies indicated that military personnel were not at an increased risk of developing psychopathology compared with the general population whilst others suggested that psychopathology, in particular PTSD, was significantly higher in military personnel.
One possible explanation for such variation in the findings might be the different study samples used, in particular the military roles of participants. Those in operational versus direct combat roles would have been exposed to varying levels of combat exposure. It has been demonstrated that those who experience greater levels of combat exposure are at an increased risk of developing psychopathology and experiencing psychological distress (Rona et al., 2009). Furthermore, studies rarely controlled for pre-existing psychological difficulties. Key research in this field tended to be conducted in either the United Kingdom or United States, which again makes it challenging to draw comparisons between these two populations given that cultural, operational and support services differ significantly. These ideas are by no means exhaustive but are likely to explain some of the disparity of literature in the field.

3. The Empirical Paper

3.1 Recruitment within a military population

Given that the goal of research is to understand a phenomenon in a population based on a study sample it is, therefore, important to have a sufficiently large and representative sample in order for findings to be generalisable. We had not appreciated how challenging recruitment would be for the quantitative phase of the project. While charities with large mailing lists helpfully shared information about the study, this did not initially yield the anticipated numbers of participants. In addition, we had a number of interested individuals contact us who did not meet the criteria either because they were still actively serving or their children were outside the necessary age bracket.

A number of organisations highlighted some of the potential reasons why recruitment might have been challenging. These included veterans not identifying with the terminology ‘veteran’, suspiciousness at the study and stigma of mental
health, taking part being too distressing, a preference for ‘pen and paper’ studies as opposed to online questionnaires and concerns about lack of anonymity. The final point links to broader issues with the study design which required interested participants to email us in order to receive their unique login details for the POD system. Indeed, participants may have been concerned about their identity being revealed and have been put off by the need to email us from their email address in order to take part. In addition, it created additional burden for interested participants. This was not something we were able to address within the scope of the project, however, it would be of interest to consider other platforms for participants to complete the online surveys on which were more user friendly. This may reduce the drop-out rate as 28% of those who emailed requesting to take part did not login and complete any questionnaires. Furthermore, some participants who completed the study offered to share the study link so that others could complete the questionnaire, however, due to the cumbersome process of participants having to be provided individual login details this was not possible.

As a result, it was necessary for our recruitment strategy to evolve in order to recruit a sufficient sample size. We were aware that the questionnaire was fairly long and had no monetary incentive, both of which are related to reduced response rates (Porter, 2004). Another potential consideration is not only the length of the questionnaire but the necessary level of literacy required to complete it. Approximately two-fifths of UK Army recruits are reported to have a reading of an 11-year-old or lower (Sellgren, 2013), while we took this into account as best we could it is still possible that potential participants were put off from taking part as a result.

Prior to introducing the monetary incentive 40 participants had taken part, and a further 72 participated with prior knowledge of the incentive. There were, however, trade-offs to introducing the incentive as it became apparent that fraudulent respondents (15 potential participants) tried to take part, and were
detected due to the similarity in their emails and email addresses. We hypothesised that they tried to take part repeatedly to receive additional compensation (Teitcher et al., 2015). This highlights the need for researchers to be vigilant to these evolving challenges whilst conducting internet-based research, and where available to put in place measures to detect and respond to fraud.

3.2 Study Design

A mixed-methods approach was selected in order to provide a more complete account of the presence of PTSD in veteran fathers and the impact on their family. Given that very little has been written on field, it was hoped that qualitative approaches would allow for in-depth exploration of different perspectives and space for new information to emerge (Shorten & Smith, 2017).

In phase one, we had been keen to reduce the burden on participants in order to reduce attrition and to enable the recruitment of an adequately powered sample. As such, we declined to include another lengthy questionnaire which captured information on participants’ prior exposure to combat. Instead we included a free-text box in the demographics questionnaire which resulted in a lack of consistency in the data collected on deployment history. In hindsight, it would have been useful to collect this data more systematically as it would have allowed for us to better understand the relationship between deployment history and trauma symptomatology, however, it is possible that this might have led to increased attrition. Nevertheless, it has prompted me to think carefully in the future about the most helpful ways of recording data and to negotiate the balance between considering the needs of the participant versus collecting sufficient and systematic data for the researcher.

3.3 Phase Two: Qualitative Interviews

In contrast to phase one, the veterans who took part in the interviews were keen to participate and invested in the interview process, this appeared to also be
reflected in the richness of the qualitative data gathered. I was initially curious as to how levels of hierarchy and power, inherent within military culture, might play out within the interview process. Interviewees were given as much control as possible in negotiating the time and location means of conducting the interview and it may be that providing them with a sense of control over the process contributed in part to their positive engagement.

Interestingly all but one of the interviews were conducted via telephone, at the participant’s request. Initially I had wondered whether this would affect the quality of the data collected but given the geographical dispersion in participants it was not feasible to conduct all interviews in person. In fact, my worries were quickly dispelled upon conducting the interviews, and developing a relationship and building rapport with the veterans seemed to happen with ease. This was evidenced by the openness of participants and one stated “I’m just really happy that I think I was able to talk as I did, like I said you’re quite a good listener and that enabled me to answer you in I think quite a lot of detail " (P4). It has been suggested that telephone interviews can in fact manage some of the inherent difficulties in conducting research into sensitive topics, such as mental health amongst military populations (Sturges & Hanrahan, 2004), by freeing the participant to be more open in their responses when not sitting face to face with the researcher.

I was somewhat taken aback by participants’ heartfelt feedback and gratitude at being able to take part in the interviews. Their passion and desire to take part in research which would benefit other veteran families was heart-warming, notwithstanding the challenge of talking about emotionally sensitive and potentially distressing topics. It provided a glimpse into the camaraderie veterans spoke about in the interviews, which they reflected on as so integral to their time in the military.

Prior to the interviews I had paid scant consideration for the potentially emotional nature of them. The interviews themselves were evocative and at times veterans spoke about intensely emotional material relating to childhood abuse,
existential questions and traumatic experiences on deployment, as well as the gruesome details relating to deaths of comrades or civilians. I recalled feeling emotionally drained following the interviews and experienced a sense of uneasiness and discomfort that participants had revealed such intimate and personal information, which could have evoked distress in them. The manner in which the interviews were scheduled and carried out very much independently contrasted with clinical work whereby I would have the support of the clinical team around me to informally debrief or receive support from. Previous research has suggested a relationship between the emotional nature of the research and the researcher's physical and emotional health (Dunn, 1991). I found it useful, therefore, to use strategies recommended in past research, such as write about such these experiences in my research journal, discuss them with fellow research co-workers and in supervision (Hallowell, Lawton & Gregory, 2005).

3.3.1 Qualitative Analysis

Careful consideration was given to whether an inductive or deductive qualitative analysis approach would be most appropriate. Initially a deductive coding framework was contemplated, using a pre-existing coding framework centred for the construct psychological mindedness (Appelbaum, 1973). It was thought that this might help us to understand the veterans’ ability to access their feelings, interest and understanding of theirs and others behaviours, intentions and motivations, as well as the extent to which they ascribe their problems to the mind as opposed to those things outside their control. However, after further consideration it was felt that this would be too restrictive and may shoehorn people’s experiences into the pre-defined coding categories. We did not want key themes to be obscured or not recognised because of preconceptions in the data collection and analysis procedure. Furthermore, since there was not a great deal of pre-existing research within the field it felt important to be open to veterans’ experiences and accounts, as
opposed to being guided by the evidence base. An inductive approach was therefore selected to develop ‘bottom-up' themes (Braun & Clarke, 2006).

3.4 Negotiating clinical and research work

This critical appraisal has prompted me to actively consider the integration of both producing and utilising scientific research, and my own experience of the ‘scientist-practitioner’ model of the Clinical Psychologist in practice. While we may be taught to strive towards this model, the reality of practicing in this way, aside from on the clinical psychology doctorate, remains somewhat elusive and challenging (Frank, 1984). Through conducting this research, I have seen first-hand how simultaneous training can provide a set of skills which complement one another.

On the one hand possessing clinical expertise and interviewing skills may have helped me in establishing a rapport with participants and gathering such in-depth information. Furthermore, on a number of occasions across the interviews it was necessary to assess clinical risk issues which were independently raised by veterans. Again, drawing on my clinical training and experience allowed me to respond calmly, confidently and proficiently. Yet particularly for the qualitative arm of this study I noted a tension between my position as both researcher and clinician, and the somewhat contrasting responsibilities of each role. I was aware of my tendency for wanting to reduce psychological distress in participants, in line with my role as a clinician, which conflicted with the methodological requirements of the qualitative research to conduct the interviews and then leave again. This internal conflict between the roles has been written about in research and is referred to as role confusion (Yanos & Ziedonis, 2006). Metaphors have been used to try to illustrate the dual-identity or dual-roles that clinical staff take on whilst completing research, such as wearing a clinical hat or research hat (Easter et al., 2006). However, I understand this to be an ineffective representation as it presumes that you can remove one such hat with ease to replace it with another which did not fit.
with my experience of conducting research. My clinical hat appeared to be more deeply rooted and had come to shape my professional identity, therefore, could not be so easily removed and swapped for another. As such, I came to appreciate metaphors which accounted for the inability to wholly separate from my identity as a clinical professional and orientation to an individual's distress and suffering. Metaphors referring to one’s *clinical skin* (Hay-Smith et al., 2016) seemed to more aptly capture the deeply rooted clinical identity which cannot be immediately and simply be removed, as I felt the reference to a hat implied. Moreover, this metaphor was able to acknowledge the inevitability of the dual-role of being both a clinician and researcher.

This tension was most likely to have arisen and framed my thinking and perception when trying to understand participant’s accounts, compare them and draw out themes across the interviews (Binder, Holgersen & Moltu, 2012). Whereas in my *clinical skin*, I noticed being drawn to exploring individual’s experiences and hypothesising about potential psychological mechanisms underlying their difficulties, much like I would in clinical case formulations. I was fortunate to have supervision which provided an opportunity to reflect upon such issues, improve my awareness of them and explore the intersection of these dual-roles.

### 3.5 Reflexivity

Throughout the research process I was conscious of how my own circumstances, identity, beliefs and experiences shaped the qualitative research process. I found it useful to keep the following quote in mind in relation to my personal reflexivity: “means turning of the researcher lens back onto oneself to recognise and take responsibility for one’s own situatedness within the research and the effect that it may have on the setting and people being studied, questions being asked, data being collected and its interpretation” (Berger, 2015, p.220).
The process of keeping a research journal was useful in reflecting on my own personal characteristics and in developing my reflexive thinking. Initially I was acutely aware of my position as a young, British woman, investigating within a hierarchical and masculine environment (Arendell, 1997), and coming to the interview process with little knowledge of the military. Moreover, much has been written about the distinction between military personnel and civilians, a “them” and “us” dichotomy (Highgate & Cameron, 2006) within military culture and so I was attentive to how my position outside the military would be perceived. Perhaps to my surprise, conversation within the interviews flowed freely and often lasted longer than the allocated sixty minutes.

With regards to my position outside of the military, it appeared to act in my favour as I found it was possible for me to ask potentially ‘naïve’ questions and gain access to a wealth of information regarding the military and cultural practices. Participants were experienced as open, hospitable and at times chivalrous. For example, upon interviewees using military terms, jargon and anecdotes, they would spontaneously explain them to me, and I suspected this was linked to my position outside the military and as a female. Interviewees can present as less guarded if the researcher is perceived as nonthreatening or even incompetent (Cassell, 2005). Thus creating an interview space whereby the veteran men were able to share their knowledge, and afforded them a sense of pride at their participation in the research and helped to build a meaningful rapport. As previously mentioned, a number of interviewees reflected on their surprise at being so open during the interview and one spoke about me being the first person he had shared his history of childhood sexual abuse outside of his family. Being both a female researcher positioned outside of the military environment appeared to offer a ‘different point of access’ (Bucerius, 2013) to the ‘field’ (Berger, 2015) which facilitated interviewee disclosures.
On the other hand, being a young, female researcher may have made veterans less likely to share certain reflections and experiences. Prior to conducting this research I had read in research that leaving the military, exposure to combat and post-deployment mental health difficulties were risk factors for violence within the family and outside the family environment (Kwan et al., 2018). Veterans spoke candidly about aggression and violence directed towards strangers and other military personnel, however, there were no reports of intimate partner violence which I later wondered whether was linked to me being female and perhaps feelings of shame around sharing such details with me.

4. Final thoughts

Being part of a study from the initial conceptualisation of the research idea, through its development and culminating in the write up has been a rewarding experience, although not without its challenges and methodological compromises. Difficulties with recruitment required the researcher to adopt a creative and flexible approach to engage veterans in the research. In spite of this, I believe this study was able to provide a valuable insight into the experiences of veterans and their families and able to facilitate a better understanding of processes occurring within military families. I hope that future research can continue to recognise the unique impact of military life on each member of the family, and use this knowledge to empower treatment providers to develop relevant and fitting interventions.
5. References


Rona, R. J., Hooper, R., Jones, M., Iversen, A. C., Hull, L., Murphy, D., Hotopf, M., & Wessely, S. (2009). The contribution of prior psychological symptoms and
combat exposure to post Iraq deployment mental health in the UK military.


Appendices
### Appendix A – List of abbreviations used in part 1 and 2

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ACEs</td>
<td>Adverse Childhood Events</td>
</tr>
<tr>
<td>APMS</td>
<td>Adult Psychiatric Morbidity Survey</td>
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<tr>
<td>DSM 5</td>
<td>Diagnostic and Statistical Manual of Mental Disorders, fifth edition</td>
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<tr>
<td>GHQ</td>
<td>General Health Questionnaire</td>
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<tr>
<td>HPA</td>
<td>Hypothalamic-pituitary-adrenal</td>
</tr>
<tr>
<td>IES-R</td>
<td>The Impact of Events Scale-Revised</td>
</tr>
<tr>
<td>ICD-11</td>
<td>International Classification of Diseases, eleventh edition</td>
</tr>
<tr>
<td>KCMHR</td>
<td>King’s Centre for Military Health Research</td>
</tr>
<tr>
<td>MOD</td>
<td>Ministry of Defence</td>
</tr>
<tr>
<td>PCL-C</td>
<td>National Centre for PTSD Checklist</td>
</tr>
<tr>
<td>PDI</td>
<td>Parent Development Interview</td>
</tr>
<tr>
<td>PRF</td>
<td>Parental Reflective Functioning</td>
</tr>
<tr>
<td>PTSD</td>
<td>Post-Traumatic Stress Disorder</td>
</tr>
<tr>
<td>RF</td>
<td>Reflective Functioning</td>
</tr>
<tr>
<td>RFQ-8</td>
<td>Reflective Functioning Questionnaire 8-item version</td>
</tr>
<tr>
<td>RFQ_C</td>
<td>Certainty about Mental States</td>
</tr>
<tr>
<td>RFQ_U</td>
<td>Uncertainty about Mental States</td>
</tr>
<tr>
<td>SDQ</td>
<td>The Strengths and Difficulties Questionnaire</td>
</tr>
<tr>
<td>TIC</td>
<td>Trauma Informed Care</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
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</table>
Appendix B – Outline of contribution to joint thesis

This thesis is presented as part of a joint thesis with ‘Investigating a general risk factor for intergenerational transmission of psychopathology in children in military families’ (Shanmugam, 2020).

From the outset Benjamin and I worked to ensure our projects were sufficiently independent. Nevertheless, it was initially helpful for us to work closely to complete the UCL ethics application, since both projects formed part of the same application. We then we both worked with Tom Fuggle to decide upon presentation of outcome measures on the POD system. We designed the recruitment strategy for phase one together as well as the promotional materials and email advertisements which were sent to third-sector organisations and charities. Finally, we also both developed the information sheet and consent form for phase one, and I independently developed these for phase two.

Data entry for phase one was not necessary since the POD system stored the data and this was then exported into SPSS independently. All methodological and conceptual decisions related to phase two, the qualitative component, was conducted by myself. All statistical analyses and qualitative analyses were conducted independently, due to the differing nature of our analyses.

In summary, the literature review, data analysis and write up of all parts of the thesis were conducted independently and without collaboration.
Appendix C – UCL & Help for Heroes Ethics Approval

29th March 2019

Professor Peter Fonagy
Department of Clinical, Educational and Health Psychology
UCL

Dear Professor Fonagy

Notification of Ethics Approval with Provisos
Project ID/Title: 15069/001: Understanding mental health in the context of military families

Further to your satisfactory to the Committee’s comments, I am pleased to confirm in my capacity as Joint Chair of the UCL Research Ethics Committee (REC) that your study has been ethically approved by the UCL REC until 1st June 2020.

Ethical approval is subject to the following conditions:

Notification of Amendments to the Research
You must seek Chair’s approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing an ‘Amendment Approval Request Form’
http://ethics.grad.ucl.ac.uk/responsibilities.php

Adverse Event Reporting – Serious and Non-Serious
It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Joint Chairs will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Joint Chairs of the Ethics Committee should again be notified via the Ethics Committee Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Joint Chairs will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Final Report
At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research i.e. Issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.
In addition, please:

- ensure that you follow all relevant guidance as laid out in UCL’s Code of Conduct for Research: http://www.ucl.ac.uk/srs/governance-and-committees/resgov/code-of-conduct-research
- note that you are required to adhere to all research data/records management and storage procedures agreed as part of your application. This will be expected even after completion of the study.

With best wishes for the research.

Yours sincerely

Professor Michael Heinrich
Joint Chair, UCL Research Ethics Committee

Cc: Emma Jones & Ben Shanmugam

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From: Allie Bennington <allie.bennington@helpforheroes.org.uk>
Subject: RE: Research advert request - Band of Brothers newsletter and website
Date: 1 November 2019 at 08:34:42 GMT
To: "Shanmugam, Benjamin" <benjamin.shanmugam.17@ucl.ac.uk>
Cc: PALS_Veteran Research <veteranresearch@ucl.ac.uk>

Dear Ben — apologies for the delay. I’m absolutely delighted to let you know that the H4H Research Approvals Committee meeting sat earlier in the month and approved your research. I shall brief our Heads of Service about your research at our next joint meeting (next week) and will send all the details through to our Head of Fellowship and Head of Welfare asking each to actively encourage staff to engage with beneficiaries who fit your eligibility criteria to get involved in your research.

Therefore, I have your Appendix B (email advert) and Appendix 12, the alternative research summary doc. Do you also have a colourful poster or advert I can also use please? Something that will attract our beneficiaries to read your advert and inspire them to contact you that I can put up on noticeboards in our Recovery Centres.

One further activity I am working on is setting up a bespoke page on our website to highlight all the research that we actively support so that beneficiaries can gain further info and contact researchers directly. This has been scoped, but not yet agreed and so is a little way off just yet sadly.

I trust this meets with your requirements and I look forward to hearing from you soon.

Kind regards,

Allie

Dr Allie Bennington | Head of Evaluation and Assurance | Help for Heroes
01980 844344 | allie.bennington@helpforheroes.org.uk
Tedworth House | Tidworth | Wiltshire | SP9 7AJ
Appendix D – Email advertisement and research flyer

Dear Sir,

Researchers at University College London (UCL), the Anna Freud National Centre for Children and Families and the Centre for Veterans’ Health at King Edward VII’s Hospital are carrying out research to look at the relationship between the mental health of veteran fathers and that of their children. We hope that this research will help to influence the type of support veterans and their families receive and how that support is offered.

We are contacting veterans through various military organisations and we are writing to ask if you would be willing to complete a few online questionnaires to help us understand more about this important issue.

Why participate:
- you will be contributing to research to improve support for veterans and their families.
- it will take just 20 minutes to complete.
- you will be entered into a lottery to win Amazon gift vouchers (a total of £200 available).
- you will be reimbursed with a £5 Amazon voucher for your time.

If you are interested in participating:
- please read the attached information sheet.
- If, after reading the information sheet, you decide you would like to take part, please e-mail veteranresearch@ucl.ac.uk stating that you would like to participate.
- Or if you have any questions, please e-mail the above address and one of the research team will get back to you.

What will happen next:
- you will receive an e-mail providing you with details of how to access the questionnaires securely online.
- Once you’ve completed the questionnaires, your e-mail address will be added to the lottery and you could win up to £50 in Amazon vouchers.

We look forward to hearing from you.

Emma Jones and Ben Shanmugam
Researchers
University College London
We want to understand more about the important father-child relationship, so we can develop more effective ways to help veterans who are struggling with their mental health while also trying to raise their children.

The research is being carried out by The Centre for Veterans’ Health at King Edward VII’s Hospital in London, University College London and the Anna Freud National Centre for Children and Families.

We are looking for veterans
(Ex-Military/Service Leavers/Armed Forces Leavers)

who have one or more child between the ages of 4 and 17 years
to fill in some questionnaires online that will take around 20 minutes to complete.

You or your child(ren) do not need to have any mental health difficulties to take part in the research. And only you are required to complete the questionnaires.

Once you’ve completed the questionnaires, you’ll receive a guaranteed £5 amazon gift voucher and enter a lottery to win up to £50 more

If you’re interested and would like more information, please email the researchers, Benjamin Shanmugam or Emma Jones, at veteranresearch@ucl.ac.uk

or Dr. Louise Morgan, Lead Researcher at the Centre for Veterans’ Health, at louisemorgan@kingedwardvii.co.uk

Thank you!
Appendix E – Full list of organisations who supported recruitment

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<thead>
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<th>Organisation</th>
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<tr>
<td>The Royal Regiment of Fusiliers</td>
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<td>The Princess of Wales Royal Regiment</td>
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<tr>
<td>The Royal Air Force Association</td>
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<tr>
<td>The Royal Marines Association</td>
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<tr>
<td>ABF The Soldier's Charity</td>
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<tr>
<td>Armed Forces &amp; Veterans Breakfast Clubs</td>
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<tr>
<td>Barclays Bank Military Network</td>
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<td>Blesma</td>
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<tr>
<td>Change Step</td>
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<tr>
<td>Combat Stress</td>
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<tr>
<td>Give us Time</td>
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<tr>
<td>Norfolk Armed Forces Covenant Board</td>
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<td>Oxford City Veterans Group</td>
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<td>Pathfinder</td>
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<td>Phoenix Heroes</td>
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<td>Poppy Scotland</td>
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<tr>
<td>Princess of Wales Royal Regiment</td>
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<td>PTSD Resolution</td>
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<tr>
<td>Ripple Pond</td>
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<tr>
<td>Royal Air Force Benevolent Fund</td>
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<tr>
<td>Royal Caledonian Education Trust: Scotland's Armed Forces</td>
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<tr>
<td>Royal Navy &amp; Royal Marines Charity</td>
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<tr>
<td>SSAFA</td>
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<tr>
<td>Supporters of Combat Stress</td>
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<tr>
<td>Surrey Health Veterans &amp; Families - Listening Project</td>
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<tr>
<td>The Grow Organisation</td>
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<td>The Poppy Factory</td>
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<td>The Royal British Legion</td>
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<td>The Warrior Programme</td>
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<td>Veterans Next Step</td>
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<tr>
<td>Veterans outreach support</td>
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<tr>
<td>Veterans Support Association</td>
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<tr>
<td>Veterans with Dogs</td>
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<tr>
<td>Veterans’ Peer Mentoring Scheme</td>
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<tr>
<td>Woody’s Lodge</td>
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</tbody>
</table>

* initial 4 charities approached to support recruitment
Appendix F – Flow of participants through phase one and two

Phase 1: Quantitative

171 Veterans who responded to email advertisement

- 15 Suspected fraudulent response
- 1 Duplicate

155 Participants sent login details to online questionnaire

- 38 Did not complete – no reason given
- 1 Found online study too difficult
- 4 Ineligible to participate due to child’s age

112 Total who took part in the online study

Phase 2: Qualitative

27 Veterans emailed with study information

- 8 Did not respond
- 2 Did not wish to participate – no reason given
- 2 Did not wish to participate – due to personal circumstances

15 Agreed to be contacted by the researcher + interview scheduled

- 1 Did not attend scheduled interview
- 1 Completed pilot interview

13 Participants took part in interview
Appendix G – Participant quantitative information sheet

PARTICIPANT INFORMATION SHEET

Project Title: Understanding Mental Health in Military Families

This study has been approved by the UCL Research Ethics Committee (Project ID): 15069/001

What is the participant information sheet?

This information tells you more about the study. Before you decide whether you would like to take part, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and do not hesitate to get in contact if there is anything that is not clear, or if you would like more information.

What is the purpose of the study?

We want to better understand the mental health of veteran families. In particular, we are interested in whether there is a relationship between the mental health of veteran fathers and their children. We hope this will influence how support is offered to veteran families.

Why have I been chosen?

We are not approaching any veterans directly to ask them to take part in the study. Veterans who get in touch with us to say they are interested in participating (self-select) and who meet the study inclusion criteria can take part.

You can take part if you meet both criteria:

1. You are a male veteran*
2. There is at least one child in your household aged between 4-17 years

*This research will define ‘veteran’ as anyone who has served for at least one day in Her Majesty’s Armed Forces, and now no longer serves (i.e. is now a civilian)

What would I need to do?

Once we have your consent, you will be sent an email invitation asking you to complete a series of questionnaires, on behalf of yourself and your child. These questionnaires will be completed online and should take between 10-15 minutes. You can fill in these questionnaires at a place that is convenient for you, using any device that has access to the internet (e.g. computer or smartphone).
Do I have to take part?

Your participation in the study is entirely voluntary and confidential. If you choose to take part you will be asked to sign a consent form. You can withdraw at any time during the process without giving a reason and there is no penalty for withdrawing.

What are the possible benefits of taking part?

It is hoped that this piece of work will help generate valuable information about mental health in military families. More specifically, participants will be contributing to the generation of knowledge from which veteran families can benefit and we hope that this can lead to better support being offered by clinical services in the future.

Are there any other incentives to taking part?

We know that many individuals participate for the above reasons but, as a small token of our appreciation for your time, all participants that complete the survey will be sent a guaranteed £5 Amazon voucher by email. In addition, you will be entered into a prize draw to win further Amazon vouchers. There will be:

- 2x £50
- 3x £20
- 4x £10.

If you withdraw from the study you will still be eligible to be entered into the draw. You will be informed if you have won a prize via your email address.

Will my taking part in this study be kept confidential?

If you participate in the study, your data will be anonymous:

- The only ‘personal’ data (i.e. data that could be used to identify you) you will be asked for is your email address. This is so we can create an account on our secure data collection platform.
- You will then be assigned an ID number. Once the ID number has been emailed to you, your email address will be stored separately in an encrypted file so that we can contact you about the lottery of gift vouchers. Once the research is complete, your contact email will then be permanently deleted. Your subsequent responses to the questionnaire will be linked to this anonymised ID number only.
- Your participation will not be identifiable within reports or publications.
If you participate in the study, your data will be kept confidential:

- All data will be collected and stored in accordance with the Data Protection Act 1998 and General Data Protection Regulation (2018).
- Only the researchers involved in this study will have access to your anonymised questionnaire answers. These will not be shared with any third parties.
- Your data will be stored in the UCL ‘Data Safe Haven’, a secure storage facility.
- Your personal data will not be stored for any longer than is necessary for the purposes of this study, after which the research team will delete it.

Limits to confidentiality

Confidentiality will be maintained, unless participants disclose something which leads the research team to be concerned about risk of harm to themselves or others. In this situation, the Principal Researcher has a duty of care to inform relevant agencies. If this is necessary, the Principal Researcher will always seek to discuss this with the participant first.

What will happen to the results of the research?

The results of this study will be fed back to the Medical Advisory Committee of COBSEO (the Confederation of British Service Charities), which works to further understand the needs of veterans and inform the care that is offered to them. The research will also be submitted as part of our Clinical Psychology doctorate theses and may be submitted for publication in peer-reviewed journals. No participants will be identified in any publication.

Data Protection Privacy Notice

The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk

This ‘local’ privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our ‘general’ privacy notice:

For participants in health and care research studies, click here
The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the ‘local’ and ‘general’ privacy notices.

The categories of personal data used will be as follows: Email address
The lawful basis that would be used to process your personal data will be performance of a task in the public interest.
The lawful basis used to process special category personal data will be for scientific and historical research or statistical purposes.

Your personal data will be processed so long as it is required for the research project. For the duration of the project, we will pseudonymise the personal data you provide. We will endeavour to minimise the processing of personal data wherever possible.
At the end of the project (expected to be July 2020), data will be fully anonymised. Anonymised data will be retained for up to 7 years after the project is complete, as it may be used as a comparator for future studies (e.g. to determine whether mental health in veteran families improves).

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Contact for further information or assistance
You will have received a copy of the Participant Information Sheet for your records electronically.

If you have any further questions or would like assistance at any point during the study, please contact Benjamin Shanmugam or Emma Jones (Trainee Clinical Psychologists) at UCL on veteranresearch@ucl.ac.uk. In the case of a complaint, please contact Dr Laura Gibbon on LGibbon@ucl.ac.uk

Name of the principal researcher: Professor Peter Fonagy, p.fonagy@ucl.ac.uk

Thank you for taking the time to read this information sheet and for considering to take part in this research.
Appendix H – Quantitative consent form

CONSENT FORM

Please complete this form after you have read the Information Sheet.

Project Title: Understanding Mental Health in Military Families

Name of Researchers:
Emma Jones and Benjamin Shanmugam

Name of Principal Researchers:
Professor Peter Fonagy - Anna Freud National Centre for Children and Families
Dr Louise Morgan - The Centre for Veterans’ Health at King Edward VII’s Hospital
Dr Laura Gibbon – University College London – Research Department of Clinical, Educational and Health Psychology

This study has been approved by the UCL Research Ethics Committee (Project ID): 15069/001

Thank you for your interest in taking part in this research. Before you agree to take part, please read through and complete this form to acknowledge that you understand your involvement in this study and that you consent to participating.

I confirm that I understand that by ticking each box below I am consenting to this element of the study. I understand that it will be assumed that un-ticked/initialed boxes means that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element that I may be deemed ineligible for the study.

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>I have read and understood the written information above and the information sheet, and I understand what the study involves. I have also had an opportunity to consider the information and what will be expected of me.</td>
</tr>
<tr>
<td>2.</td>
<td>I have been given the opportunity to ask questions about the project and my participation.</td>
</tr>
<tr>
<td>3.</td>
<td>I voluntarily agree to take part in this project.</td>
</tr>
<tr>
<td>4.</td>
<td>I understand that I can withdraw from this project at any time, without having to give a reason, and that I will not be penalised for withdrawing or questioned further on why I have withdrawn.</td>
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<tr>
<td>5.</td>
<td>I understand that my data gathered in this study will be stored anonymously and securely. It will not be possible to identify me in any publications.</td>
</tr>
<tr>
<td>6.</td>
<td>I understand that all information provided will be treated as strictly confidential and that all efforts will be made to ensure that I cannot be identified.</td>
</tr>
<tr>
<td>7.</td>
<td>I understand that the data will NOT be made available to any commercial organisations but is solely the responsibility of the researchers undertaking this study.</td>
</tr>
<tr>
<td>8.</td>
<td>I understand that the direct/indirect benefits of participating</td>
</tr>
<tr>
<td>9.</td>
<td>I understand that if I choose to withdraw, this will not affect my compensation for taking part in the study.</td>
</tr>
</tbody>
</table>
10. I understand that only the Researchers involved in this study will have access to this data.

11. I agree that my anonymised research data may be used for future research.

12. I am aware of who I should contact if I wish to lodge a complaint.

13. I agree to sign and date this informed consent form.

Participant:

☐ Please tick this box if you consent to taking part.

________________________
Name of Participant

________________________
Email Address

☐ UCL researchers may use my details to invite me to take part in related follow-up studies.

Thank you for your help.
Appendix I – Quantitative screening questionnaire

Screening Questionnaire

This questionnaire is to check that you are eligible to take part in the study.

1. What is your gender?
   a. Male ☐
   b. Female ☐
   c. Other ☐

2. Are you an Armed Forces veteran?
   a. Yes ☐
   b. No ☐

3. Do you have a child currently aged between 4-17 years old?
   a. Yes ☐
   b. No ☐

Thank you for taking the time to complete this questionnaire.
Appendix J – Quantitative study demographics questionnaire

Demographic Information

This questionnaire will ask you about your military history and some demographic information.

Please complete the following questions as accurately as possible by ticking one option per question, unless otherwise specified.

This questionnaire should only take 5 minutes to complete. Be assured that all of your answers will be used for research purposes only and will be kept in the strictest confidentiality.

Military History

1. How long were you in the Armed Forces for? (months/years)

2. Which branch of the Armed Forces did you serve in?
   a. Royal Navy
   b. Army
   c. Royal Air Force
   d. Royal Marines
   e. Other

3. What was your type of engagement in the Armed Forces?
   a. Regular
   b. Reserve Forces

4. What type of role did you serve in?
   a. Combat arms
   b. Combat support
   c. Combat service support
   d. Other

5. What was your highest rank in the service?

6. While in the Armed Forces have you ever been:
   a. Deployed operationally
   b. Deployed non-operationally
   c. Both
7. Please could you specify below a list of your previous deployments (i.e. location of deployment, the year and length of each deployment and whether the deployment was kinetic or non-kinetic), if not applicable please type “N/A”:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Demographics

1. How old are you?
________________________________________________________________________

2. Do you currently have a partner?
   a. Yes  ☐
   b. No   ☐

3. How many children do you have?
   a. 1 ☐
   b. 2 ☐
   c. 3 ☐
   d. 4+ ☐

4. What are the age(s) of your children?
________________________________________________________________________

Thank you for taking the time to complete this questionnaire.
Appendix K – Full list of outcome measures used in phase one

i. The Reflective Functioning Questionnaire 8-item version (RFQ-8)

ii. The Impact of Events Scale-Revised (IES-R)

iii. The Alcohol Use Disorders Identification Test (AUDIT)

iv. The General Health Questionnaire 28-item version (GHQ-28)

v. They also reported on their children’s mental health using the parent-rated Strengths and Difficulties Questionnaire (SDQ).
PARTICIPANT DEBRIEF SHEET

Understanding Mental Health in Military Families

Thank you for taking part in our study, we appreciate that you gave up your time to take part and hope that you found it interesting.

Summary of the Research Project

The aim of this study is to better understand the mental health of veteran families. In particular, we are interested in whether there is a relationship between the mental health of veteran fathers and their children. We hope this will influence how support is offered to veteran families.

What to do if you feel concerned about your participation in the study

If you are concerned after taking part in the study it may be useful to talk to a family member, a friend or your GP.

In addition to this support there is also free and confidential advice provided by the veteran charity Combat Stress which can be found on their website: https://www.combatstress.org.uk/ or by calling their 24-hour mental health helpline on 0800 138 1619 or by texting 07537 404719 or emailing helpline@combatstress.org.uk

An alternative free and confidential mental health helpline is provided by the charity the Samaritans who can be contacted by calling their 24-hour helpline on 116 123.

If you feel at immediate risk, or if you have any concerns or further questions regarding this research, then please do not hesitate to contact project supervisor Dr Laura Gibbon on L.gibbon@ucl.ac.uk

Thank you for taking the time to read this debrief sheet
Appendix M – Email advertisement for those who consented to further research

Hi X,

We really appreciate you taking the time to complete the online questionnaires today.

I am emailing as you consented to be contacted about participating in follow-up research relating to this study. We would like to better understand more about this important issue and so we are conducting 1-hour interviews with participants who have completed the online questionnaires, either in person at UCL or via telephone.

Why participate:

- You will be contributing to research to generate valuable information about mental health in military families and so improve support for veterans and their families.
- You will be reimbursed a £20 Amazon voucher as a token of our appreciation.

If you are interested in participating:

- Please read the attached information sheet.
- If, after reading the information sheet, you decide you would like to take part, please reply to this e-mail stating that you would like to participate.
- Or if you have any questions, please e-mail the above address and one of the research team will get back to you

Best wishes,

Emma Jones
Researcher
University College London
Appendix N – Participant qualitative information sheet

PARTICIPANT INFORMATION SHEET
You will be given a copy of this information sheet

Project Title: Understanding Mental Health in Military Families

This study has been approved by the UCL Research Ethics Committee (Project ID): 15069/001

What is the participant information sheet?

This information tells you more about the study. Before you decide whether you would like to take part, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and feel free to ask me any questions if there is anything that is not clear, or if you would like more information on.

What is the purpose of the study?

We want to better understand the mental wellbeing of veteran families. In particular, we are interested in how veteran fathers make sense of their own feelings and the potential impact of these feelings on their family. We hope that developing a better understanding will influence how support is offered to veteran families.

Why have I been chosen?

We are not approaching any veterans directly to ask them to take part in the study. Veterans who get in touch with us to say they are interested in participating (self select) and who meet the study inclusion criteria can take part.

You can take part if you meet these criteria:

1. You are a male veteran and have previously been deployed
2. There is at least one child in your household aged between 4-17 years
3. And you have taken part in phase 1 of the study

What would I need to do?

Once we have your consent, you will be invited in for an interview which will last up to 1 hour. The interview will be conducted on a date and time which is convenient to you and can take place at UCL or via skype, if this is more convenient and you live outside London. The interview will be audio recorded and subsequently transcribed. These recordings will be used only for analysis as part of this research project.
What will I be asked to talk about in the interview?
The interview will involve talking about your previous experience on deployment(s), whether you encountered any challenging experiences whilst you were deployed and how these experiences might have influenced others in your support network.

Do I have to take part?
Your participation in the study is entirely voluntary and confidential. If you choose to take part you will be given a copy of this information sheet to keep and asked to sign a consent form. You can withdraw at any time during the process without giving a reason and there is no penalty for withdrawing. You do not need to answer all of the questions and you can stop the interview at any time.

What are the possible benefits of taking part?
It is hoped that this piece of work will help generate valuable information about mental health in military families. More specifically, participants will be contributing to the generation of knowledge from which other veteran families can benefit and we hope that this can lead to better support being offered by clinical services in the future.

Are there any other incentives to taking part?
If you participate in the research you will be reimbursed a £20 Amazon voucher for your time as a token of our appreciation. In addition, travel expenses for those living in London will be paid for.

Will my taking part in this study be kept confidential?
All personal details and information that you provide will be stored securely and remain confidential throughout the course of the project. Your participation will not be identifiable within reports or publications as the interviews will be anonymised prior to the reporting of the results.

Limits to confidentiality
Confidentiality will be maintained, unless participants disclose something which leads the research team to be concerned about risk of harm to themselves or others. In this situation, the Principal Researcher has a duty of care to inform relevant agencies. If this is necessary, the Principal Researcher will always seek to discuss this with the participant first.
What will happen to my data?

- All data will be collected and stored in accordance with the Data Protection Act 1998 and General Data Protection Regulation (2018).
- Only the researchers involved in this study will have access to the recordings of your interview. These will not be shared with any third parties.
- Audio recordings will be stored in the UCL ‘Data Safe Haven’, a secure storage facility.
- Your personal data will not be stored for any longer than is necessary for the purposes of this study, after which the research team will securely delete it.
- The information gathered will be analysed to find common themes across all of the interviews (this method is called ‘thematic analysis’).
- As is typical in qualitative research, some excerpts of the text will be used in written reports. These will never be attributed to any individual and care will be taken to ensure that they could not be used to identify the individual.

What will happen to the results of the research?

The results of this study will be fed back to the Medical Advisory Committee of COBSEO (the Confederation of British Service Charities), which works to further understand the needs of veterans and inform the care that is offered to them. The research also forms part of a Clinical Psychology doctorate thesis and may be submitted for publication in peer-reviewed journals. No participants will be identified in any publication.

Data Protection Privacy Notice

The data controller for the project will be University College London (UCL). The UCL Data Protection Office provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk. UCL’s Data Protection Officer can also be contacted at data-protection@ucl.ac.uk.

The categories of personal data used will be as follows: Email address

The lawful basis that would be used to process your personal data will be performance of a task in the public interest.

The lawful basis used to process special category personal data will be for scientific and historical research or statistical purposes.
Your personal data will be processed so long as it is required for the research project. For the duration of the project, we will pseudonymise the personal data you provide. We will endeavour to minimise the processing of personal data wherever possible.

At the end of the project (expected to be July 2020), data will be fully anonymised. Anonymised data will be retained for up to 7 years after the project is complete, as it may be used as a comparator for future studies (e.g. to determine whether mental health in veteran families improves).

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Contact for further information or assistance

If you have any further questions or would like assistance at any point during the study, please contact Emma Jones (Trainee Clinical Psychologist) at UCL on veteranresearch@ucl.ac.uk. In the case of a complaint, please contact Dr Laura Gibbon on lgibbon@ucl.ac.uk

Name and contact details of the principal researcher:

Professor Peter Fonagy - p.fonagy@ucl.ac.uk

Thank you for taking the time to read this information sheet and for considering to take part in this research.
Appendix O – Qualitative consent form

CONSENT FORM

Participant identification number: [ ]

Project Title: Understanding Mental Health in Military Families

Name of Researcher: Emma Jones

Name of Principal Researchers:
Professor Peter Fonagy - Anna Freud National Centre for Children and Families
Dr Louise Morgan - The Centre for Veterans’ Health at King Edward VII’s Hospital
Dr Laura Gibbon – University College London – Research Department of Clinical, Educational and Health Psychology

This study has been approved by the UCL Research Ethics Committee (Project ID): 15069/001

Thank you for your interest in taking part in this research. Please complete the following questions about your participation and consent.

I confirm that (please tick box as appropriate):

1. I have read and understood the written information above and the Information Sheet, and I understand what the study involves. [ ]

2. I have been given the opportunity to ask questions about the project and my participation. [ ]

3. I understand that relevant sections of data collected during the study may be looked at by individuals from the research team at University College London. I give my permission for these individuals to have access to my data. [ ]

4. I understand that I can withdraw from this project at any time, without having to give a reason, and that I will not be penalised for withdrawing or questioned further on why I have withdrawn. [ ]

5. I understand that the discussions will be audio-recorded for transcription and analysis, and that the original recording will be destroyed once this is done. [ ]

6. I understand that the transcripts will be anonymous using ID numbers and so it will not be possible to identify me in any publications. [ ]

7. I understand that all information provided will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 2018. [ ]

Participant:

Name of Participant __________________________ Signature __________________________ Date __________________________

Researcher:

Name of Researcher __________________________ Signature __________________________ Date __________________________

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Appendix P – Interview schedule

NB. Questions in italics are prompts

Introduction
- Thank them for offering to take part
- Check what the participant wants to be called
- Go through consent form and practical information
- Explain why you want to talk to them & the purpose of the evaluation - we’ve asked you to take part in this interview as we’re interested in speaking to men who have been deployed as part of their time in the military and who also have a family....
- Discuss any concerns or questions the participant might have

Building a rapport with the participant
- Can you start by telling me a little about your family setup and who you live with?
  - Have they currently got a partner?
  - How old are your children?

Veteran’s Trauma Symptoms
- What was your experience of your previous deployment(s)?
  - either operational or non-operational?
- Would you describe any part of your previous deployment(s) as having been a traumatic experience? Use their own language in relation to this answer throughout the rest of the interview i.e. “trauma experience”
  - Prompt for details on what exactly they found traumatic
- Did you notice any difference in your behaviour since you returned home from your deployment?
  - Any specific examples?
  - How did you make sense of this change in behaviour?
- Do you think about the ‘traumatic experience’ in the same way now as you did when you first returned from your tour of duty?

Impact on Relationship & Family
Relationship
- Have your “trauma experiences” had an impact on your current relationships with friends or your partner (if applicable)?
  - In what way have they had an impact?
Family
- Have there been any changes to family dynamics/relations following your return from your deployment?
  - In what way have they had an impact?
- Do you think your children took on any additional responsibilities/roles following your “trauma experience”?
  - Give examples

Impact on Children
- Do you think your “trauma experience” had an impact on your children?
  - In what way?
- Has (have) your child(ren) ever had their own mental health difficulties?
  - Do you think it was affected by your deployment? In what way?
- What was your child (children’s) understanding of your difficulties/change in behaviour?
- Did you or your partner talk to your children about your “trauma experience”? 
Do you think talking to your children about your difficulties was beneficial for your child(ren)?
If not: (What stopped you or your partner from talking to your children about your difficulties?)

Personal Impact

- How did your “trauma experience” impact on your personally?
  - How have you coped with your own difficulties?
- Have you shared your deployment experiences with anyone?
- Was there any support you had that helped you to manage?
- Have you spoken to any healthcare professionals?
  - Was this helpful or unhelpful?

Is there anything else you’d like to tell me in that I might not have asked about or add anything about anything we’ve discussed today?
PARTICIPANT DEBRIEF SHEET

Understanding Mental Health in Military Families

Thank you for taking part in our study, we appreciate that you gave up your time to take part and hope that you found it interesting.

Summary of the Research Project

The aim of our study is to better understand the mental wellbeing of veteran families. We are particularly interested in how veteran fathers make sense of their own feelings and experiences, how they cope with potentially traumatic experiences from deployment and their understanding of the potential impact of these feelings on their family. We hope that developing a better understanding will have an impact on the support that is offered to veteran families.

Some of the topics discussed during the interview may have brought up thoughts or feelings which you had not previously considered, or may have made you recall memories which could be perceived as distressing. Therefore, we have provided information below on relevant charities that could provide you with further support for this.

What to do if you feel concerned about your participation in the study

If you are concerned after taking part in the study it may be useful to talk to a family member, a friend or your GP.

In addition to this support there is also free and confidential advice provided by the veteran charity Combat Stress which can be found on their website: https://www.combatstress.org.uk/ or by calling their 24-hour mental health helpline on 0800 138 1619 or by texting 07537 404719 or emailing

helpline@combatstress.org.uk
An alternative free and confidential mental health helpline is provided by the charity the Samaritans who can be contacted by calling their 24-hour helping on 116 123.

If you feel at immediate risk do not hesitate to contact Dr Laura Gibbon (details below).

Contact Details

If you still have concerns or wish to contact the research team to discuss any of the information further, then please do so by getting in touch with Emma Jones on veteranresearch@ucl.ac.uk

If you feel that we have not addressed your questions adequately or if you have any concerns about the conduct of the research team, then please contact my supervisor Dr Laura Gibbon on lgibbon@ucl.ac.uk

Thank you for taking the time to read this debrief sheet
Appendix R – Snowballing recruitment email

Dear Sir,

Thank you for taking part in the Veteran Fathers’ Health Survey. We are emailing to ask whether you would be able to further help by letting other eligible veteran fathers know about the research.

So far, we have had responses from 94 veteran fathers, and we are hoping that we can get to 120 participants to enable the research to have the best impact. As you probably know, we want to understand more about the important father-child relationship, so we can develop more effective ways to help veterans who are struggling with their mental health while also trying to raise their children.

Because the research is a collaboration between University College London, the Anna Freud National Centre for Children and Families, and the King Edward VII’s Hospital, there is real hope that this research could help inform and develop the right kind of support for veteran families.

We would therefore be really grateful if you were able to pass this invitation on to any veterans (Ex-Military/Service Leaver/Armed Forces Leaver) who have one or more child between the ages of 4 and 17 years. The time taken to complete the survey but tends to be around 20 minutes. And veterans do not need to have had difficulties with mental health.

All participants will continue to receive a guaranteed £5 amazon gift voucher and their e-mail address will be entered into a lottery to win up to £50 in amazon vouchers. We know that many of you are not supporting this research for this reward, but we hope that it indicates, in a small way, our huge thanks and appreciation for your time and support.

We are kindly inviting all eligible veteran fathers to email us at veteranresearch@ucl.ac.uk to find out more and/or participate.

With many thanks and warmest regards,
Emma and Ben
Researchers, University College London
Twitter: @UCLVeteran2019
Appendix S – Qualitative Analysis – Example Transcribed Interview

I= Interviewer P=Participant

I: Oh okay, okay. I mean coming back to some of that behaviour you were talking about like being a bit erratic in your mood swings and feeling quite angry, how did you make sense of your change in behaviour at the time?

P: Ermm….I…..I didn’t make any sense I don’t think it was just yeah….just….I don’t think…I potentially noticed the changes or took notice of the changes I think’s probably a better word. You know I thought I was fine, I was just cracking on you know…

I: Yeah…yeah

P:….so yeah….it…. (long pause)

I: And do you think now that you think about that or that change in behaviour in the same way? It sounds like...you’ve sort of reflected on it a little bit from where you were at back then

P: Yeah….yeah I have… I probably have…I mean I kind of you know after seeing that lady at the, that psychiatrist for four months and kind of getting fobbed off by them, by the NHS I kind of just sort of wrapped on it and thought urgh this is it, I’ll go back and work where you know, just kinda get away sorta thing...

I: okay

P:….and then obviously since being back from there now…erm…it’s now got to the point where I just need to take the time out and err, and get sorted out otherwise you know it’s just gunna be a never-ending story you know…

I: mmm

P:….of highs and lows and all the rest of it so ermm yeah I mean it’s difficult. I dunno…er…er… I do sorta think about ermm you know it’s strange, you don’t notice it in yourself…

I: yeah

P:…at first and then, and then in 2016 when there was that incident I spent about 18 months, didn’t see anyone…I didn’t see anyone, I didn’t…apart from going to work and coming home that was it.

I: mnhmm

P: …so I mean we’ve got quite a close knit family erm although we’re now at the stage where we’re kind of starting to, we’ve always had a close circle of friends that we would but we wouldn’t go out, and for that 18 month period we didn’t…I mean I didn’t see anyone.

I: mmm
P: ...and we’re now starting to you know see friends. We’ll go to their house and they’ll come here or ermm....But obviously working away for such long periods of time it...you know that doesn’t help either...

I: mmm..mmmm....and do you think some of these traumatic events that you’ve experienced have had an impact on your relationship with your wife?

*Transcription continues*
Appendix T – Qualitative Analysis – Example of annotated transcript

...erm so yeah it’s had a huge impact...X said that the boys were happier when I wasn’t there as well...so it’s not that they’re being horrible she was just in tears just being truthful...so yeah had a horrendous impact really...

[Int]
Mmm mmm

[Int]
...I do overreact...particularly with my eldest son I really clash with him and I do really overreact sometimes....

[Int]
Mmm mmm and do you think as a result to changes in dynamics, that your children have ever sort of taken on additional roles or responsibilities within the family?

[Int]
I think a couple of times...not really...I think, I think they’re wary of me...sometimes...my eldest can’t stop himself pushing buttons but a couple of times he has...perhaps...(long pause)...made more of an effort on my behalf than I would want him to you know...you can see he’s making a special effort to look after me because...it’s back when I was having really bad times when I was properly unwell...

[Int]

[Int]
Erm so kind of just vegetating on the sofa...and I was aware enough that he was doing that because I didn’t want it to be like that...erm...but it definitely changed dynamics in that...X (wife) became...far more the parent and I effectively became...a third child or treated as such even by the boys to a certain extent...you know I only really got involved backing X up if they were naughty but then I...then I’d probably overdo it...she would then...she would then erm...take the boys side over me and I would feel really...isolated and alone and betrayed...and...it did change family dynamics a bit really that it was those three and I was some kind of strange interloper....

[Int]
Mmm mmm mmm and I think you sort of touched on this already actually but...kind of thinking specifically about some of the experiences you had on deployment and whether that’s had an impact on your children? I mean you sort of started to explain that I think...

[Int]
...I think it has a little...I think they’ve got an awareness but this also runs into the ambulance service because my problem in the ambulance service is that the things I’ve done there and where I’ve operated (X & Y) and places like that...I use a lot of the skills that I used...in counter-terrorism than working in the ambulance service...armed counter terror raids at three in the morning that kinda thing...dealing with bombs and stuff...but only from an ambulance point of view but it keeps everything live in my head...and it keeps all the memories alive and it keeps all the emotional responses live to it all.