“Resilience is expected in the Forces”. A qualitative study to explore what military veterans understand resilience to mean.

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Abstract

Background: There is minimal research into resilience with military veterans, including any role played in facilitating the ability to resist adverse outcomes after exposure to trauma. Resilience as a construct is debated within the psychological literature with little agreement as to what resilience might be, how best to conceptualise it, and therefore how to measure it or best design interventions to promote it. The present study seeks to answer the broad question "what do veterans understand resilience to mean?" seeking to further elucidate resilience as a construct, and how it impacts the health and wellbeing of veterans in ways they deem relevant.

Method: A qualitative research paradigm was chosen for this study with co-production with veterans-by-experience in the planning, design, data collection and analysis. Braun and Clarke's (2006) six stage method of thematic analysis, was utilised to analyse semi-structured interviews with sixteen military veterans, who had completed at least one day of active service. This included non-combat related deployments, for example 'peace-keeping' missions.

Results: Themes were developed according to what veterans understood by resilience, how it developed, and the impact of being a military veteran in this process. Veterans indicated that their experiences of resilience were those of being adaptable in face of adversity. Two further themes concentrated on this adaptability as a process that developed over time, and two themes highlighted the influence of group identity and membership on resilience, with resilience identified as part of the military identity.

Discussion: The findings locate individual experiences within existing theoretical models of resilience, and examine the broader sociocultural context of the military. Clinical implications are framed within systemic considerations and sociocultural factors such as how

group identity and membership impact access and ability to use resources required to ‘be resilient’ in the face of the adversities experienced by military veterans.

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Table 1: Acronyms used in thesis

Acronyms	
PTSD	Post-traumatic Stress Disorder
PTE	Potentially Traumatic Event
CSF	*The Comprehensive Soldier Fitness Programme*
CD-RISC-	The Connor-Davidson Resilience Scale
BMP	Beliefs about psychotropic medications & psychotherapy (scale)
DRRI	The Deployment Risk and Resilience Inventory
DRRI-2	The Deployment Risk and Resilience Inventory-2
RS-14	14-Item Resilience Scale
BRS	The Brief Resilience Scale
RS	The Resilience Scale
BDI	Beck Depression Inventory
BAI	Beck Anxiety Inventory
PSS-SR	PTSD Symptom Scale Self Report
MIC	Clinically important change in measurement scores repeated over time
PRA	Participatory Rural Appraisal
PAR	Participatory Action Research
TA	Thematic analysis

1. Introduction

1.01 Thesis overview

This thesis utilises co-production to thematically examine how sixteen military veterans understand resilience and its relevance to them and those around them. The aims were to explore veterans' views of resilience by asking questions in meaningful ways to produce knowledge that might be both 'practically useful' (Reason & Bradbury, 2001), and able to contribute to a developing evidence base around military mental health and wellbeing (e.g., Green et al., 2010; Litz, 2014; Mobbs & Bonnano, 2018). The thesis maintains that resilience may be an important resource, able to foster potentially good outcomes in the lives of military veterans. This thesis explores the resources that promote resilience in military veterans and the protection they may afford in the wake of adversity or trauma.

Research into the general nature of resilience reveals a multitude of perspectives and approaches. Some have sought to elucidate the personality characteristics that typified those who reacted positively to difficult conditions in their lives (Fletcher & Sarkar, 2013). Others have sought to examine *how* individuals are able to maintain typical levels of functioning (i.e., show adaptation) after exposure to traumatic events by making use of such resources at individual, social and community levels (e.g., Bonanno & Mancini, 2008). Qualitative studies have developed understanding around the role of culture in defining 'resilient behaviours' and the processes by which individuals are able to develop their 'resiliencies' across varied cultural contexts and situations (e.g., Feldman & Masalha, 2007). Research with military veterans has tended to conceptualise resilience as buffering against the development of combat-related PTSD (e.g., Pietrzak et al. 2010). Thus far, due to a paucity of psychometrically robust measures assessing resilience in military samples, it remains difficult

to draw conclusions about how the construct may be related to their psychosocial health and functioning.

Hence it is argued that resilience is usefully examined across differing levels (e.g., individual and social; Ungar 2018) to understand how it may both develop in the context of adversity, and confer protection from the deleterious outcomes possible as a result of this exposure. Access to resilience-promoting resources and consideration of environments that may be able to foster their development appears an important area for development in the assessment and treatment of military veterans who require support to adapt successfully in the wake of military, or indeed civilian adversities. (e.g., Steenkamp, Nash & Litz, 2013**; S**teenkamp, Litz, Hoge & Marmar, 2015).

1.02 Chapter overview

To introduce the aims of the study, this chapter will consider why it might be useful to examine resilience with military veterans and present relevant research in regards to the nature of resilience. Varying theoretical models of resilience will be explored and critiqued. Existing literature exploring the concept of resilience in military veterans will be presented and discussed. The concept and measurement of resilience in military veterans will also be discussed, and existing literature will be summarised and critiqued. A rationale for the further examination of resilience in military veterans will be made including the choices in relation to this for the current study, including co-production.

1.03 Why might resilience be relevant in research with military veterans?

Research with military veterans has tended to focus on the negative consequences of wartime trauma on mental health (e.g., Hoge, Auchterlonie & Milliken, 2006), with studies identifying high levels of major depression, post-traumatic stress disorder and particularly alcohol abuse

in this population (e.g., Elbogen et al., 2013; Mustillo et al., 2015). Lifetime prevalence rates of wartime trauma related PTSD have been estimated at between 11% and 19% in U.S. veterans of the Vietnam War (Dohrenwend et al., 2007). More recent estimates, however, show discrepancies. Some studies with US veterans deployed to the recent conflicts in Iraq and Afghanistan have estimated the range of prevalence to be between 4.7% and 19.9% (Magruder & Yaegar, 2009), however, when population sampling procedures and prospective designs are utilised, PTSD rates have consistently been documented under 10% (Bersten et al., 2012; Bonanno et al., 2012; Bonanno, Kearney, Porter & Powell 2017; McNally 2012). Rates of PTSD in UK Coalition Forces deployed in the conflicts in Iraq and Afghanistan have been estimated at 4% (Fear et al., 2010). When such variability is considered alongside the fact that combat veterans represent a self-selected population who have willingly faced traumatic experiences with foreknowledge, (Larner & Blow, 2011), wartime trauma may be viewed through a different lens. Indeed, most veterans report more positive outcomes from their wartime experiences than negative outcomes, and many who feel distressed initially overcome their difficulties to live improved lives (e.g., Schok, Kleber, Elands & Weerts, 2008; Murphy, Palmer & Spencer-Harper, 2016). It would make sense that one such positive outcome may be resilience , which implies a relative resistance to environmental risk experience and overcoming of adversity (Masten, 2011). Veterans, surprisingly due to their unique experiences of occupational stressors (Litz, 2014), have been largely ignored in studies of how individuals are able to make sense of difficult experiences and even thrive (Rosner & Powell, 2006). One possible explanation for the paucity of research into resilience within a veteran population stems from the complexity of definition as discussed widely in conceptual reviews (e.g., Windle, 2011; Pangallo, Zibarras, Lewis & Flaxman, 2015). Such debates surrounding the nature of resilience will be considered further in relation to theoretical models that seek to elucidate the nature of resilience (e.g., Richardson 2002).

"*Success is how high you bounce when you hit the bottom "*

(General George S. Patton U.S. Army)

1.04 The sociocultural context of the military and how this may impact resilience

The military can be thought of primarily as a combat organisation that requires maintenance of an effective fighting force at all times (Green et al., 2010). From the point of selection, throughout training and continuing on through a career that may involve several deployments, individuals are exposed to multiple occupational stressors (e.g., King et al, 2006; Dandeker et al, 2006; Litz 2014) and 'at risk' of exposure to multiple potentially traumatic events (PTEs) (cf Bonanno 2004, 2005; King et al., 1998; Greenberg et al., 2007). As noted by various authors, entering the military involves a period of training that is explicitly focused not only on developing the physical stamina required to meet the demanding nature of service and combat (Lieberman et al., 2014; Williams et al., 2016), but also on military standards, values and ethics (McGurk, Cotting, Brit & Adler, 2006). This means that although men and women enter military from diverse social and cultural backgrounds, they all share a process of assimilation into military culture (Demers, 2011). Through this process of 'military acculturation' various rituals, such as group meals constrained by times (Lieberman et al., 2014), and cultural norms that stress equality and comradeship within units (Demers, 2011) are developed and reinforced. Importantly through this process of acculturation into the military a sense of group membership (Tajifel, 1978; Turner, Brown & Tajifel, 1979) and military identity is fostered. This identity can lead individuals to espouse values of loyalty, duty, honour, commitment to one another to unit and to their nations (Demers, 2011). Discipline, self-sacrifice, belief in a merits based reward system and obedience to a legitimate authority are promoted by the 'military organisation' (Collins, 1998). It appears, therefore, that individuals develop a sense of 'military

collectivism' where bonds of interpersonal interdependence (Triandis, 1988) are necessary both to fulfil military obligations and for survival. Indeed, this 'military interpersonal dynamic' has long been viewed as a vital contributor to overall military readiness and capability (Williams et al., 2016). This may suggest that military bonds underlie resilience under combat conditions. It has been commented that the military is built on traditional 'masculine' values (e.g., Barret, 1996; Green et al., 2010). As such being socialised into this 'military masculinity' may involve emotional suppression or stoicism, which represents an aspect of the stereotypical masculine gender role (e.g., Murray et al., 2008; Mobbs & Bonanno, 2018) on the one hand. On the other hand, however, military service involves a surrender of control when following orders, the need for mutual cooperation, strong interpersonal bonds of friendship and the endorsement of intense emotional expressivity in certain situations (e.g., Barret, 1996; Hockey 2003; Hearn, 2003), suggesting a complex balance between 'stereotypical masculinity' and "softer more tender masculinities…not least in the throes of military survival" (p. xiv). There is some evidence to indicate a positive association between stoicism and resilience (Ahlström & Sjöden, 1996), however, to the best of the author's knowledge, this link has yet to be identified in populations where stoicism is explicitly cultivated such as with military veterans. There is, however, also evidence to indicate that stoicism may contribute to veterans minimising or failing to disclose their more general emotional distress (e.g., Barret 1996; Green et al., 2010). Such emotional suppression could also feasibly contribute to lowered levels of resilience over time, and indeed there is evidence demonstrating the need for a complex balance between emotional suppression and emotional enhancement in order to adjust successfully after exposure to traumatic events (Bonanno et al., 2004). There appears almost no research on how such phenomenon contribute or relate to resilience in military populations (Mobbs & Bonanno, 2018). Considering how the suppression of distress has been linked to inhibited

acknowledgement and treatment- seeking in samples of military veterans (e.g., Green et al., 2010), the need to explore *if* and *how* emotionality is linked with veteran resilience appears a key area for further empirical research. Currently, research into the resilience shown by military veterans appears more focused at the level of the interpersonal traits that are positively associated with advantageous outcomes, such as a lack of 'psychopathology', after exposure to PTEs (e.g., Bonanno 2005; Elder & Clipp 1989; King et al., 1998). Such research will be considered further in relation to theories that seek to explain the nature of resilience in protecting against negative outcomes under conditions of adversity.

1.05 Theories of resilience

Within the psychological literature resilience has emerged as an area of empirical interest from studies that identified the various personality traits that protected young people living under conditions of adversity (e.g., Werner and Smith 1982; Elder, 2018). However there has been considerable inconsistency in these findings with differing traits implicated in defining or promoting resilience across differing populations and situations of adversity (e.g., Cicchetti & Garmezy, 1993; Gooden 1997; Richardson, 2002; Bonanno 2005; Bonanno & Mancini 2008). Such variability has led some authors to suggest that resilience is best viewed as the process of how such qualities are developed and utilised in promoting resilient outcomes under conditions of stress and/or opportunity (e.g., Richardson, 2002). It has been noted that this research fails to adequately account for the contribution of psychosocial protective factors such as social support (e.g., Ahern, 2006; King et al 1998; 2006; Pietrzak et al., 2010) or environmental factors, including access to employment (e.g., Ungar & Leibenberg 2011; Ungar et al., 2007, Bonanno, Galea, Bucciarelli & Vlahov, 2007) to resilience. Indeed such observations have encouraged researchers to explore the 'social-ecological' resources (cf Ungar 2004) that may contribute to resilience, and the role of group/ cultural identities (e.g., Tajifel, 1978; Turner, Brown & Tajifel , 1979; Ahern et al., 2015;

Mobbs & Bonanno, 2018) and cultural contexts (e.g., Koss & Harvey, 1991; Harvey, 1996; Harvey et al, 2003) in promoting or restricting access to these resources and in defining what is deemed as a 'resilient outcome'. Each of these theoretical approaches will be considered below starting with research that seeks to elucidate the personal qualities that constitute and/or promote resilience, moving to perspectives that seek to account for the interaction between people and their social-ecology, and finally those that account for group and cultural variations. Additionally research that applies such theoretical considerations to the examination of resilience in the wake of PTEs (Bonanno 2005) including military trauma (e.g., Elder & Clipp 1989; King et al., 1998) will be considered and reviewed.

(i) Trait approaches to resilience. Various studies have examined the personality characteristics that negate against deleterious outcomes after exposure to adversity or trauma. This research tends to be longitudinal (e.g., Werner & Smith, 1992) or cross-sectional in nature (e.g., Bachanas et al, 2002). Werner & Smith, (1992) for example classified children as being resilient on the basis of outcomes, such as academic attainment, repeated at various time points. From this data children that were achieving well and those that were struggling in the context of risks such as poverty and parental mental ill-health were identified. These approaches generated lists of personality traits, characteristics and resources that researchers identified as representing resilience. These lists were often idiosyncratic and while impressive such individual qualities have not led to identification of which may exclusively and consistently confer or define resilience (Tarter & Vanyukov, 1999). It is important too to note that these studies have consistently identified environmental and relational resources as being part of what makes children resilient. In addition, there may have been other relevant factors namely aging and transitions, such as moving schools or house that may have impacted and defined resilience in ways that would not have been accounted for within the scope of study designs. Such attempts to continue to identify 'resilient qualities' proliferated

under the auspices of positive psychology (Csikszentmihalyi & Seligman, 2000) with characteristics including optimism (Peterson, 2002) and contentment identified as being able to buffer against the effects of stress and indeed psychopathology in military populations (Litz, 2014). A further contributing factor to the understanding of resilience in military populations has been the concept of dispositional hardiness (Bartone, 1991; 1995; 2006), which can be viewed as a potential pathway towards adaptive functioning. Personality hardiness was said to include a characteristic sense that change is valuable and provokes curiosity, that challenges have meaning and that we have agency in deciding our futures (Bartone, 2006). Accordingly identifying and promoting amplification of such dispositional traits in 'at-risk' individuals has been taken on as the way to promote resilience in the US Army via *The Comprehensive Soldier Fitness Programme (CSF)* (Cornum, Matthews & Seligman, 2011; Seligman & Fowler, 2011). However, a systemic review of the CSF revealed no evidence that it prevented PTSD after exposure to the harms of war, or that it demonstrated an incremental effect in increasing abilities to successfully respond to daily hassles and adversities (Steenkamp, Nash & Litz, 2013). Such 'trait' approaches to understanding resilience have inspired a number of resilience measures, for example the Connor-Davidson Resilience Scale (CD-RISC; 2003), which will be reviewed according to authors' own conceptualisations of resilience and relevant psychometric properties to ascertain their suitability and utility in elucidating the resilience construct in veteran samples.

One widely cited theory considering the role that personality traits might play in promoting resilience, is the metatheory of resiliency (Richardson, Neiger, Jensen & Kumpfer, 1990; Richardson, 2002). Individuals are identified as adapting to changes, including adversity, through development of relevant 'personal protective factors' that can lead to various outcomes, one of which represents resilience. Resilience is said to occur if an individual develops additional protective factors and is able to move past the disruption by improving

their internal balance or 'homeostasis'. There has been some support for this model in terms of health promotion (e.g., Dunn, 1994) however application tends to relate to populations who have experienced childhood adversity (e.g., Walker, 1996) or are under current stress. As noted by Litz (2014) expecting an individual to rely on personal qualities is neither ethically responsible nor perhaps particularly useful as a pathway to resilience under the conditions of military combat or trauma. Such theoretical concerns will be explored further in relation to research that has examined the construct in civilian/ military populations exposed to traumatic events and losses (e.g., Bonanno 2004; 2005; King et al 2006, Hourani et al 2012).

(ii)The social- ecology of resilience. Understanding resilience as a product of the social-ecological context that surrounds an individual includes recognising the capacity of informal and formal social networks to facilitate positive development under adverse conditions (Obrist, Pfeiffer & Henley, 2010; Ungar 2011c). As such resilience is defined as the capacity of *both* individuals and the environments they occupy to interact in ways that promote positive adaptations (Ungar, 2013). Ahern and colleagues (2015) conducted in-depth interviews with 24 veterans of the wars in Iraq and Afghanistan between 2009 and 2011 and utilised thematic analysis in identifying their views on what affected their abilities to adapt successfully in the face of adversities associated with transitioning to civilian life (e.g. Green et al., 2010; Mobbs & Bonanno, 2018). Findings highlighted that 13 out of 24 veterans considered the support of military peers as vital both in terms of providing emotional support, and in clarifying and advising how to navigate unfamiliar civilian systems and lending practical support. With this support veterans noted they were able to manage transition stress. Furthermore, this appeared to be the case for some even in the absence of support from the military as an institution in providing access to environmental resources such as advice on benefits (Ahern et al., 2015). In another study Marcellino and Tortorello (2014)

interviewed 26 instructors in the US Marines on two occasions to explore their experiences of stress and what allowed them to successfully navigate these experiences, i.e., to show resilience. Participants identified that, for them, stress and resilience was socially mediated. One participant provided an example of struggling to master part of a skill under the stressful conditions of basic training, that was required to successfully perform his role as a Marine instructor. He identified continuing perseverance in learning and practicing the skill in order to be a successful member of his unit (Marcellino and Tortorello, 2014). Taken together these findings indicate the importance of resources at social and environmental levels working in combination with personality characteristics, such as perseverance, in promoting resilience for military personnel across a variety of stressful conditions. Paradoxically, however, the opposing relationship between social support or family connection and resilience has been observed in a prospective study over 5 years with New York City youth (Seidman & Peterson, 2003). Youth who were less involved or were emotionally detached from parents were better able to cope with 'dysfunctional family patters' in contexts of economic hardship. This appears to indicate how both an individual's cultural context and the specific nature of their adversity can define and constrain their attempts to be resilient (e.g., Ungar & Leibenberg 2011; Ungar et al., 2007; Windle, 2011; Mobbs & Bonanno, 2018), and a relativism in terms of the processes that might underlie resilience (Ungar, 2013) for different groups under differing conditions of adversity. There is a paucity of research that examines the processes that underlie veteran resilience, and indeed how their cultural contexts impact their expression of resilience. The sociocultural context of the military, as discussed earlier, demonstrates clear differences from civilian life, one example being 'military collectivism' (e.g., Demers, 2011). Therefore it appears important to examine qualitatively how, as yet unnamed, protective processes may be a part of veteran understandings and expressions of resilience (Ungar, 2003).

(iii) The role of group theories and cultural contexts in resilience. The role of culture appears implicit in social ecological models of resilience, and indeed cultural contexts and group/community level resources have been identified as one of the defining features of resilience (e.g., Ungar, 2013; Harvey, 1996; Harvey et al, 2003; Bonanno et al., 2007), particularly where people experience the intensifying effects of social and economic marginalisation and have been exposed to trauma (e.g., Ungar & Lienberg, 2011; Feldman & Masalha, 2007; Harms, Kizza, Sebunnya & Jack, 2009). Green and colleagues (2010) explored the impact of the 'masculine culture' of the military on how ex- servicemen were able to express their emotional distress. Semi-structured interviews were conducted with 20 veterans. Thematic analysis revealed that those soldiers who were able to cope with the stresses of military life appeared in part able to do so due to the protective benefits afforded through the camaraderie, close emotional bonds, and caring ethos between one another (Green, 2010). Paradoxically, it appeared that stoically withstanding the demanding nature of military training and military life allowed new recruits to access these caring aspects of the military group identity (Green et al., 2010, Barret 1996; Mobbs & Bonanno, 2018). Such findings indicate that important aspects of resilience in the face of military adversity are defined and constrained by the 'cultural milieu' in terms of how resources are defined and made available, for example caring aspects of 'masculine' bonds of interpersonal interdependence (Triandis, 1988). Additionally, being able to access culturally defined resources in military context appears influenced by whether an individual is assimilated into the military group such that they are identified as 'one of the group' by the group, and indeed identify themselves as a member of the 'military group' (e.g., Tajifel, 1978; Turner, Brown & Tajifel , 1979; Demers, 2011; Mobbs & Bonanno, 2018). This suggests that the *if* and *how* of military resilience is in whether individuals are able to make use of social and ecological resources, including 'social support'. Taken together findings across the literature on group

membership (Tajifel, 1978) and interpersonal bonding (Triandis, 1988) in the context of the military (e.g., Barret 1996) indicate that accessing and using social resources in order to withstand military stress may depend on whether people share a similar set of day to day practices, values and beliefs, i.e., culture (Ungar 2013). Demers (2011) conducted a mixed methods study involving focus groups with military personnel exploring their experiences of reintegrating into civilian life after deployments. Thematically orientated analysis identified that veterans experienced greater challenges and higher levels of distress when attempting to fit back into civilian society, then their active duty or reservist counterparts. Veterans elucidated that leaving the military stripped them of important cultural norms, such as collectivism, loyalty and honour, that they had come to rely on in defining themselves. This created alienation from friends and family, and for some a crisis of identity and struggles with their mental health (Demers, 2011). These findings resonate with explorations of resilience in marginalised populations. Similar risk and protective factors, were for example implicated in promoting resilience across groups, however culture shaped the attitude, cognitions and behavioural outcomes the were associated with resilience (Ungar, 2013). It was found, for example that two differing ethnic minority groups experienced similar 'risks' to their wellbeing due to their 'social marginalisation'. The two groups differed, however, in that social support from extended family was found to foster resilience in one sample and to exert pressure in terms of balancing work and family life in the other sample (Feldman & Masalha, 2007). One contributing factor to this difference in how 'social resources' were appraised and used, was cited as cultural differences across these two samples (of different ethnicities) in the expectations of the structure of relationships with extended family members, for example for often family members engaged socially with one another (Ungar 2013). Overall, these findings suggest that group membership and culture allow for individuals to access culturally- defined routes towards resilience, such as stoicism in the face of military training,

which promote or restrict access to 'cultural resources' such as camaraderie that are required to adapt to situationally-defined experiences of stress such as military training and combat. Furthermore, it would appear that adapting under conditions of social and economic marginalisation implicate a greater 'weighting' of social and culturally relevant resources in comparison with personality characteristics in promoting resilient adaptation (e.g., Harms et al., 2009). Such considerations will be explored further below with research that explores how individuals have been able adapt successfully in the wake of potentially traumatic experiences and losses (e.g., Bonanno 2004; Bonanno & Mancini 2008; Schoon; 2006; Windle, 2011).

(iv) Resilience in the face of potentially traumatic events. Research examining how adults respond and adapt after exposure to traumatic events (e.g., Bonanno, 2004; 2005; Bonanno, Galea, Bucciarelli & Vlahov, 2007) has identified that resilience may be a common response. Studies have shown that of those who experienced the untimely death of a spouse or child (Bonanno et al, 2002; Bonanno, Moskowitz & Folkman, 2005) around 50% were consistently shown to be resilient on the basis of low scores on measures of psychopathology, measures of positive emotions, and ratings of positive adjustment from close friends. However, as noted by Windle (2011), the presence of distress and the maintenance of competence may indicate one of the strongest forms of resilience, and distress may indeed be likely for most people after an exposure to a traumatic event(s). This raised questions regarding the utility of measures of psychopathology, including PTSD, as useful indicators of resilience or vulnerability after the exposure to PTEs or losses. Additionally a nuanced picture was found by Elder and Clipp (1989) in veterans who had experienced heavy combat in World War II and the Korean War. These veterans become significantly more resilient and less helpless, as indicated by self-reported measures of personality characteristics such as self-assurance and assertiveness, throughout adult life, however, were not symptom free in terms of impairments

in functioning and emotional distress. Moreover, in a study conducted by King and colleagues (1998) 'trait resilience', conceptualised as hardiness (Kobasa Hardiness Scale; Kobasa, 1979), contrary to their prediction did not confer protection from PTSD under conditions of heavy combat for either men or women. This finding has been replicated with studies with prisoners of war (e.g., Zeiss & Dickman, 1989), suggesting there may be a limit on the protection offered by dispositional traits under conditions of extreme adversity. Indeed other studies have identified the role of close emotional bonds between servicemen as a vital aspect of how they maintain their abilities to cope and function under combat conditions (e.g., Lieberman et al., 2014; Williams et al., 2016) and when exposed to 'transition stress' (e.g., Demers, 2011; Ahern et al., 2015). Overall, these findings indicate a need for further exploration of the cultural processes and social-ecological resources that lead to resilience in veterans who are exposed to PTEs as part of their occupational duties (Litz, 2014). Furthermore recent evidence indicates that veterans may be resilient in part due to their repeated occupational exposure to traumatic events, and that civilian resilience 'catches up' in those with more exposures to trauma (Sanborn, Yalch & Bongar, 2021). Indeed this 'steeling effect' has been observed in studies whereby exposure to traumatic events leads to buffering against potential deleterious outcomes when later instances of similar experiences are encountered (e.g., Masten 2011; Schoon, 2006). It, is however, important to note that under conditions of chronic adversity such as economic marginalisation, children who had showed an 'academic resilience' at age 5 were no longer doing so by age 16, and were doing worse in exams than their economically privileged peers (Schoon, 2006). This may indicate that previous resilience is not able to protect against persisting and chronic disadvantage. Research with adults who have experienced PTEs tends to focus on single acute incidents (e.g., Bonnano 2004) and in such cases personality characteristics may be necessary and sufficient for successful adaptation. It may be that chronic adversity is more difficult to

manage (Fergus & Zimmerman, 2005) due to continued and possibly higher exposure to PTEs. This appears particularly relevant for military veterans who are likely to have experienced a combination of chronic stress and acute trauma (e.g., Litz, 2014) and as such the resources they require to be resilient may differ from those utilised by adult civilians.

(v) Limitations to research. As interest in the study of resilience has burgeoned the literature has attempted to take into account challenges of definition, whereby resilience can be viewed as a trait, a process or indeed as an outcome of that process (e.g., Fletcher & Sakar, 2013). It would appear attempts to classify resilience as stable personality traits fail to identify these consistently across populations, and across varied situations of adversity. For example an internal locus of control, as identified by Garmezy and colleagues (1993), as part of the resilient personality disposition that allowed children of parents with serious mental ill-health to avoid psychopathology, has been shown to have little or no relevance as a protective personality trait in an African American child from a lower-class home who perceives little or no access to higher education or economic security (Gooden, 1997; Ungar 2013). Furthermore, theories that have attempted to explain the role of 'trait protective factors' in positive adaptation have done so in response to 'internal and external changes', allowing for the antecedents to this 'process of resiliency' to include thoughts, feelings, new experiences and new information (Richardson, 2002). Without the presence of adversity protective traits or dispositions may aid or lead to adaptation, however, these traits cannot be said to be an indicator of resilience *per se* (e.g., Luthar, Cicchetti & Becker 1999; Roisman, 2005; Agaibi & Wilson, 2005; Windle 2011; Fletcher & Sakar, 2013). Methodological limitations across studies include authors' idiosyncratic and often atheoretical labelling and identification of the traits that represent resilience (e.g., King et al., 1998; Elder & Clipp 1985). Differences across study designs that seek to model the association of various traits and outcomes mean that resilience is understood differently if examined cross-sectionally (e.g., Bonanno 2004) ,

retrospectively (e.g., Demers, 2011) or prospectively (e.g., Schoon, 2006) as a static or dynamic process (or trait/ constellation of traits) respectively. Additionally, the situational nature of adversity and the availability of social ecological resources and culturally- bound opportunities to express resilience has further complicated the picture (Ungar, 2018). Resultantly, resilience has been viewed as the absence of psychopathology after exposure to military combat (King et al., 1998; Elder & Clipp; 1989), academic achievement (Schoon, 2006) and minimal disruption to functioning, and a lack of psychopathology with continued abilities to experience positive emotions after the death of a spouse or child (Bonanno, Moskowitz & Folkman, 2005). Research with military veterans appearing to examine protective factors, or resilience, is disparate. Trait approaches and quantitative designs appear favoured by authors examining resilience as those protective factors that negate against the development of PTSD in response to exposure to the traumatic conditions of combat (e.g., Elder & Clipp, 1989). When ex-Forces personnel are invited to share their experiences of alternative 'types' of adversity through qualitative designs a more nuanced picture of resilience develops implicating close interpersonal bonds (e.g., Barret 1996; Green et al., 2010, Demers, 2011) and a potential role of military cultural norms and values in their resilience (e.g., Mobbs & Bonanno, 2018). Studies with military personal are limited in their generalisability by considerations including a lack of ethnic and gender diversity (e.g., Elder & Clipp, 1989) and by unclear processes of theme identification and development in qualitative studies (e.g., Demers, 2011). Furthermore samples tend to 'mixed' in practice, involving a combination of active duty, reservist and veteran personnel (e.g., Demers, 2011), or focused at a particular branch of the military, for example Marines (Marcellino and Tortorello, 2014). Considering the research presented above, it is likely that personal demographics (e.g., Feldman & Masalha, 2007), the nature of military occupations (e.g., Vogt et al., 2013), deployment number, length and tempo (e.g., Adler et al., 2005, Palmer et

al., 2019), and indeed experiences of transitioning into civilian life (e.g., Ahern et al., 2015) all play a defining role in the resilience expressed by military veterans. Therefore, it is suggested that a more integrated approach is taken across future studies focusing on understanding resilience in military veterans. Study designs that are capable of demonstrating how varying theoretical perspectives of resilience may complement each other may be best able to shed light on the dynamic nature of resilience, and the processes operating at various levels that intersect and influence each other to promote positive adaption (Ungar, 2013).

1.06 Literature review of conceptualisations of resilience in quantitative studies

A paucity of qualitative literature was found that directly examined resilience with in military veterans, with one study found that focused on the resilience of the military family rather than veterans *per se* (Cramm et al., 2018). Therefore the decision was taken to examine the broader quantitative literature. One aim of this review was to understand how resilience has been conceptualised in a veteran population by examining this thematically across the identified literature. A second and related aim was to understand and synthesise how these authors' conceptualisations of resilience related to measurement of resilience in terms of scale choice and psychometric quality. As such the review will identify quantitative literature that has utilised resilience scales to ascertain their psychometric adequacy in veteran samples, with particular focus on content validity, internal consistency and construct validity to understand how representative these measures are of the resilience construct in veteran populations (see Appendix A for search method and terms). As such this literature review seeks to answer whether there is any consensus across identified literature as to the definition of resilience, and to what extent there are psychometrically robust measures of resilience in veteran populations that allow for accurate study, measurement and evaluation of resilience

promoting interventions in this population (e.g., Strauss et al, 2016). The process of the search strategy is summarised in Figure 1.

(i) Inclusion and exclusion criteria. Inclusion criteria:

- Peer reviewed articles, written in English
- Study included a scale/ scales explicitly defined as measuring resilience.
- Sample 50% or greater military veteran (the remaining composition may be made up of active duty military personnel, reservist personnel etc.,).

Exclusion criteria:

- Studies that claimed to measure resilience, but did not use a resilience scale.
- Study did not contain original data.
- Conceptually related cases, or attempts by authors to operationalise resilience as composite variables comprised of personality traits and constructs that combine to form 'resilience' (e.g., King et al., 1998; Elder & Clipp, 1989).
- Qualitative articles.

Papers were excluded if a questionnaire was not used to measure resilience. Schok, Kleber & Lensvelt- Mulders (2010), for example, measured 'resilience' as a composite variable comprised of perceived control, optimism and self-esteem. Seventeen articles that measured resilience within a veteran population were included in the final review.

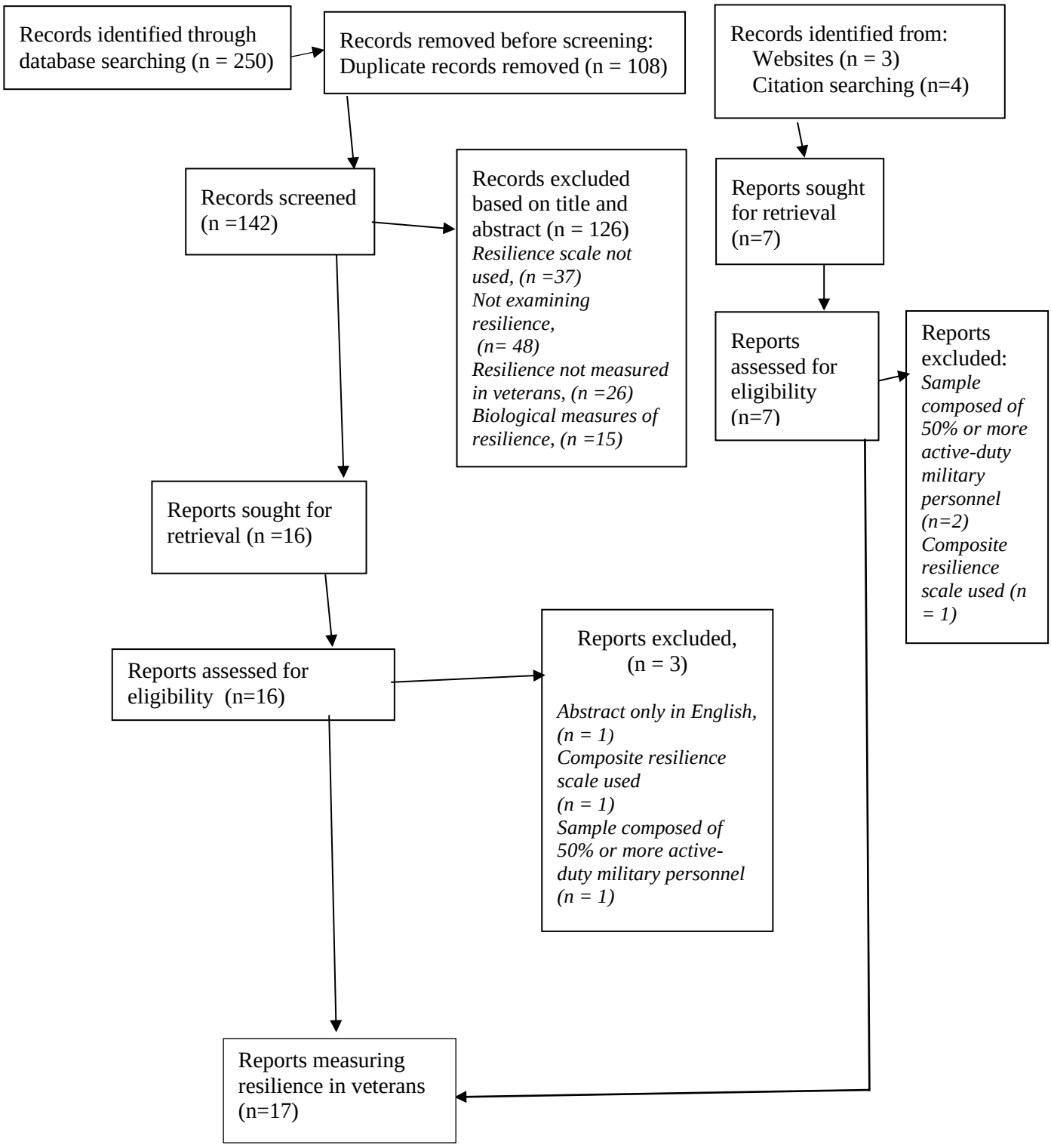

Figure 1: PRISMA flow diagram detailing search and screening process

(ii) Quality assessment. A quality assessment framework including internal consistency, content validity, construct validity, criterion validity, responsiveness, reproducibility, floor and ceiling effects, and interpretability (Terwee et al., 2007) was used to assess identified resilience scales. Where papers demonstrated full evidence for a psychometric property being met, a score of 2 was awarded, if partially met a score of 1 was awarded, and where papers presented no information relevant to a particular psychometric property of the resilience scale used a score of 0 was given. For full scoring criteria, see Appendix B . Authors' conceptualisations of resilience are presented and discussed in relation to relevant psychometric properties of their measure of choice.

(iii) Results. Table 2 describes the seventeen articles examining resilience within military populations, and the self-report scales used. Table 3 shows quality assessment scores for each resilience measure (study numbers correspond with those in Table 2).

Table 2: Study descriptions and elaboration of resilience measurement scales used

Study number/ Author(s) (date)	Measure of resilience	Number of dimensions (items) and rating	Sample(s)/ demographics	Nationality of sample	Purpose of study
1. Blackburn & Owens. (2016)	The Connor-Davidson Resilience Scale (CD-RISC)	5(25) Rated on a 5-point Likert scale from 0- not true at all to 4- true nearly all of the time	Veterans who had deployed to Iraq or Afghanistan (N= 191)	U.S. military veterans	To examine relationships between PTSD, combat exposure, resilience, and intrusive and deliberate rumination
2. Pietrzak, Johnson, Goldstein, Malley & Southwick. (2009)	CD-RISC	As above	Soldiers who had served in Operations Enduring Freedom and Iraqi Freedom veterans (OEF/OIF) since 2003 (N= 272: No PTSD= 225 PTSD =59) 72.2% National Guard or reserves 27.8% active duty	U.S. military veterans from Connecticut	To examine potential protective factors against PTSD and depressive symptoms, including psychological resilience
3.Pietrzak et al. (2010)	CD-RISC	As above	OEF/ OIF veterans who had served between January 2003 and January 2007 (N= 272) National guard/reserves: 72% Active duty: 28%	U.S. military veterans from Connecticut	To investigate potential protective factors against PTSD, depressive symptoms and psychosocial difficulties, including psychological resilience
4. Hourani et al. (2012)	CD-RISC	As above	Marines attending mandatory Transition Assistance Program Workshops (i.e. had served 90+ days) to prepare for discharge (Baseline;	U.S. military	To characterise the impact of resilience and combat exposure scale scores on mental health outcomes of Marines after separating from military service

Study number/ Author(s) (date)	Measure of resilience	Number of dimensions (items) and rating	Sample(s)/ demographics	Nationality of sample	Purpose of study
			N=2581). Follow up sample; transition complete and civilian for minimum of 2 months (N= 444)		
5. Green, Calhoun, Dennis & Beckham (2010)	CD-RISC	As above	Veterans who had served since 09/11/2001 (N= 497) Active duty: 3% Reserve forces duty: 44% Discharged: 45% Retired: 8%	U.S. military	To examine relationships between resilience, trauma exposure and PTSD diagnosis
6. Green et al. (2014)	CD-RISC	As above	Veterans who had served since 09/11/2001 (N= 1981) Discharged: 51% Serving in reserves or National guard 32% Retired: 9% Active duty: 6%	U.S. military	To examine the structural validity of the 25 item CD-RISC.
7. Youssef et al. (2013)	CD-RISC	As above	Military personnel/ veterans who had served on/ after 09/11/2001 (N=1488) Active duty: 5.3% Reserve forces duty: 6.7% Discharged: 54.7% Retired: 14.3%	U.S. military	Evaluation of the effect of childhood trauma and resilience on suicidal ideation and depressive symptoms while controlling for the effects of PTSD and combat exposure.
8. DeViva et al. (2016)	CD-RISC	As above	Veterans of OEF/OIF and Operation New Dawn (OND) (N=100) Deployments: One: 45% Two: 37% Three or more: 18%	U.S. military	To examine whether beliefs about mental health treatment, barriers to care, personality traits and resilience effect utilisation of mental health services

Study number/ Author(s) (date)	Measure of resilience	Number of dimensions (items) and rating	Sample(s)/ demographics	Nationality of sample	Purpose of study
9. Greenberg et al (2019)	CD-RISC	As above	Homeless veterans (N=100) With history of psychosis: 41 Without history of psychosis: 59	U.S. military	To examine relationships between resilience and functional and cognitive variables e.g., community participation and working memory respectively
10.Elliott, Hsiao, Kimbrel, Meyer, BeBeer, Gulliver, Kwok & Morissette (2015)	CD-RISC	As above	Iraq/Afghanistan war veterans (N=127). In receipt of service-connected pension for disability (n=82, 64 %)	U.S military	To examine prospective influence of undercontrolled, overcontrolled and resilient personality prototype on PTSD symptoms and depression, accounting for the effect of combat exposure and history of traumatic brain injury. Associations between the various protypes and functional variables including self-reported resilience.
11. Elliot et al (2017)	CD-RISC	As above	Iraq/Afghanistan war veterans (N=127). In receipt of service-connected pension for disability (n=82, 64 %)	U.S military	To examine adjustment among war veterans with overcontrolled, undercontrolled and resilient personality prototypes with and without a brain injury, with combat exposure as covariate.
12. King et al. (2006)	Deployment Risk and Resilience Inventory (DRRI)	14 (350) 10 scales of risk factors, 4 of resilience Dichotomous responses (0=no, 1=yes) / 5-point Likert scale e.g., from 1-	Samples of Gulf war veterans Focus groups (n=33) Examination of psychometrics and further validation (n= 357, n= 317, n=357)	U.S. military	Assessment of situational risk and resilience factors relevant to contemporary military personnel

Study number/ Author(s) (date)	Measure of resilience	Number of dimensions (items) and rating	Sample(s)/ demographics	Nationality of sample	Purpose of study
		strongly disagree to 5-strongly agree	Active duty and National Guard/ Reserves:		
13..Fikretoglu, Brunet, Poundja, Guay & Pedlar. (2006).	DRRI	As above.	Veterans (n=1112) who had participated in UN and North Atlantic Treaty Organization peacekeeping operations (86%) or World War II and Korean war veterans (14%)	Canadian military	Validate French-Canadian version of a measure of DRRI and examine relationship between such factors and post-deployment functioning
14..Vogt et al. (2013)	Deployment Risk and Resilience Inventory- 2 (DRRI-2)	17 risk and resilience factors (210)	Operation Enduring Freedom/ Operation Iraqi Freedom veteran samples, separated from service within the last 2 years Focus group (n=22) Revision of scales (n=469; 59.1% female, 40.9% male). 42.5% reported 2+ deployments to Iraq or Afghanistan Confirmation of scales/ final revision n= 1046; 53.3% female, 46.5% male). 51.1% reported 2+ deployments.	U.S. military	Updated assessment of warfare experiences and expanded coverage of key family environment-related factors throughout the cycle of deployment, relevant to the development of resilience or trauma related sequalae
15. Maoz, Goldwin, Lewis & Bloch (2016)	DRRI-2	As above	Army veterans for focus group (n=13) Sample for scale validation: veterans discharged after mandatory service (N= 101; 39 males, 52 females)	Israeli military	Validation of DRRI-2 among nonclinical sample of soldiers, discharged after mandatory service
16. Rice & Lui. (2016)	The 14-item Resilience Scale (RS-14)	5 (14) Rated on a 7-point Likert scale from 1-	Active service members and veterans (N=191) Active service: 33%	U.S. military	To investigate relationship between coping and resilience

Study number/ Author(s) (date)	Measure of resilience	Number of dimensions (items) and rating	Sample(s)/ demographics	Nationality of sample	Purpose of study
		strongly disagree to 7-strongly agree	Military veterans: 67%		
17. Elliot et al (2019)	The Brief Resilience Scale (BRS)	1 (6) Rated on a 5- point Likert scale from 1-strongly disagree to 5-strongly agree	Iraq/Afghanistan war veterans (N= 264;). Around 72% had a VA service-connected disability.	U.S. military	To investigate how resilient personality protype facilitates adjustment in veterans with and without TBI, with self-reported resilience as one potential mediator

Table 3: Quality ratings for measures of resilience.

Study number	Scale	Content validity	Internal consistency	Criterion validity	Construct validity	Reproducibility Agreement	Reproducibility Reliability	Responsiveness	Floor/ceiling effects	Interpretability	TOTAL/ 18
1	CD-RISC	0	1	0	2	0	0	0	0	0	3
2	CD-RISC	0	1	0	0	0	0	0	0	1	2
3	CD-RISC	0	1	0	1	0	0	0	0	0	2
4	CD-RISC	0	0	0	1	0	0	0	0	0	1
5	CD-RISC	0	0	0	0	0	0	0	0	1	1
6	CD-RISC	0	2	0	1	0	0	0	0	0	3
7	CD-RISC	0	0	0	0	0	0	0	0	0	0
8	CD-RISC	0	0	0	1	0	0	0	0	0	1
9	CD-RISC	0	2	0	1	0	0	0	0	1	4
10	CD-RISC	0	1	0	1	0	0	0	0	1	3
11	CD-RISC	0	1	0	1	0	0	0	0	1	3
12	DRRI	2	1	0	1	0	0	0	0	1	5
13	DRRI	2	1	0	1	0	1	0	0	0	5
14	DRRI-2	2	1	0	1	0	0	0	1	0	5
15	DRRI-2	2	0	0	2	0	1	0	0	0	5
16	RS-14	0	0	0	1	0	0	0	0	1	2
17	BRS	0	1	0	0	0	0	0	0	1	2

(iv) The Connor-Davidson Resilience Scale (CD-RISC; Connor-Davidson, 2003). The CD-RISC was utilised in eleven out of seventeen studies.

Overall quality. The highest overall score, of four, was gained in study 9 (Greenberg et al., 2019) for information presented on internal consistency, construct validity and interpretability.

(v) Authors' conceptualisations of resilience across studies utilising the CD-RISC. Resilience was conceptualised as various traits by authors who used the CD-RISC. Blackburn and Owens (2016) in Study 1 emphasise the importance of resilience as a buffer against PTSD for military veterans, or as the ability to manage stress while maintaining a typical level of functioning (Bonanno & Mancini, 2012), however do not elucidate how resilience provides this buffer or allows for the management of stress. Pietrzak et al (2009) in Study 2 similarly identify resilience as providing a buffer against combat- related PTSD. However, across both these studies authors note the importance of personality hardiness and social support as what buffers against or aids in the recovery from PTSD in military veterans, which are not the primary focus of their resilience measure of choice. It is important to note that both studies relied upon self-reported retrospective accounts of combat exposure, resilience and PTSD to examine similar research questions- is there a negative association between PTSD symptomology and resilience at varied levels of combat exposure? One limitation of these studies is their cross-sectional nature, whereby the sequence of events and causality cannot be determined (Pietrzak et al 2009). Therefore it is unclear whether the negative association between higher levels of combat exposure and resilience suggest that resilience precedes combat exposure, via versa, or if some other variable impacts upon this association. Additionally it is of note that both samples were predominately White and male, as is the case for a further six out of the eleven studies that utilised the CD-RISC which limits the

generalisability of findings. Furthermore both studies demonstrated further specificity in sampling with Study 1 targeting veterans who were in college, with higher levels of education having been linked to higher levels of resilience (Blackburn & Owens, 2016). Study 2 focused recruitment on volunteers in the Connecticut area, with the potential for veterans who lived in differing locations to have access to differing resources such as social support upon leaving the military and for a more geographically diverse sample to have more chance of serving across differing units during their service .

Across all eleven studies presented in this review that utilise the CD-RISC in military samples (with compositions including military veterans at 50% or greater) authors elucidated resilience as personality traits or characteristics that buffered against the development of PTSD after exposure to military trauma/ stress (e.g., Green et al., 2010; Green et al., 2014; Elliot et al., 2015). Authors cited varying personality traits as contributing to this buffering effect including meaning making, active coping, cognitive flexibility and positive emotions (Study 3; Pietrzak et al., 2009), coping skills, self-efficacy and optimism (Study 9; Greenberg et al., 2019) and resourcefulness, social competence and flexibility (Study 11; Elliot et al., 2007). However *how* such traits confer resilience or act together to provide a buffer against combat-related PTSD in military veterans, was not specified by any of the authors. Additionally the CD-RISC was developed as a measure of stress-coping in the general population and additionally validated as a clinical measure to assess treatment response. One example was assessment of short-term pharmacotherapy in (adult civilian) patients with PTSD (Connor- Davidson, 2003). Connor & Davidson (2003) noted that patients receiving a pharmacologic intervention for PTSD showed a 25% increase in their baseline resilience scores. This could point to a potential confound in that the CD-RISC may be designed to measure traits that covary with mental ill health rather than traits that negate against stress or adversity more generally. The original five factor structure of personal competence, trusting

in one's instincts, positive acceptance of change, control and spiritual influences, may not be the most relevant factors implicated in buffering against 'military trauma' or stressors. Indeed these five factors were not supported in studies that performed factor analysis when utilising the CD-RISC in samples including military veterans. Green and colleagues (2014) found support for a two-factor solution of adaptability and self-efficacy, and a one-factor solution was supported in a sample of homeless veterans (Greenberg et al., 2019). It may be quite likely that trusting in one's own instincts and a sense of control do not buffer against the stresses associated with combat or homelessness and therefore, confer no buffering effect in terms of emotional distress or PTSD. It is important to note that while Study 6 (Green et al., 2014) was composed of a community sample (46% White, 49% Black/ African and 5% other) and Study 9 (Greenberg et al., 2019) a majority White sample in receipt of care from the Veteran Administration, support was not found for the original five factor version of the CD-RISC in either sample. This may indicate that (trait) resilience has specific characteristics in (majority) veteran samples, even when accounting for varied socio-demographic differences, that are not fully captured by CD-RISC. Additionally when samples included greater ethnic diversity as in Studies 5, 6 and 7 differences in self-reported resilience were not highlighted *per se*, however being an ethnic minority was associated with lower scores on a measure of alcohol use (Green, Calhoun, Dennis & Beckham, 2010) and lower depression scores (Youssef et al., 2014) which were found to be negatively correlated with resilience. With majority male samples it is difficult to draw conclusions about any impact of gender on resilience, although associations were noted between female gender, and depression (Green et al., 2010;Youssef et al., 2014)

These eleven studies, when examined together provide some indications of the potential benefits of trait resilience, if not an equivocal indication what these traits might be in veteran samples. As found across all studies that examined construct validity resilience was

consistently associated with lower levels of psychopathology, suggesting that there may be some protective benefit of higher trait resilience in negating against the development of mental health problems for veterans. Additionally studies highlight that resilience, as measured by the CD-RISC may moderate the relationship between combat exposure and PTSD severity, such that those with higher resilience scores had lower levels of self-reported PTSD at all levels of combat exposure (Blackburn & Owens, 2016) and lower self-reported suicidal ideation (Youssef et al., 2013). It is important to note that across these eleven studies some level of caution must be applied when interpreting the results. Sample sizes in some cases are small, for example in Studies 8, 9, 10 and 11. Study 8 highlights a high level of intercorrelation between assessment measures, this considered in combination with a multinominal regression analysis with a greater number of predictors than would be typically recommended results in lower power and a lack of clarity around the independent contribution of measures in the treatment versus no treatment conditions. Finally Studies 10 and 11 attempt to examine relationships between author defined personality types and the later development of mental health problems and functionality, including resilience, while controlling for the effect of combat exposure. Both studies also attempt to control for the presence of traumatic brain injury (TBI). It would appear, however, that important confounders such as transition stress and pain that have been linked to the development of mental health difficulties in veterans (Hourani et al., 2012) were not considered in the authors' specification of risks to optimal adjustment. This is important to consider in combination with sample sizes of 107 and 127 respectively that would fall below some recommendations for using path analysis (Weston, Chan, Gore & Catalano, 2008). With narrow and specific theory driven hypothesis about resilience, for example that a resilient personality prototype would be significantly associated with more personal resources that were theoretically characteristic of resilience including distress tolerance, social support and

self-reported resilience, controlling for TBI and combat exposure (Elliot et al., 2017), and small sample sizes limit any conclusions that can be drawn about differences in self-reported resilience across different personality type. Indeed differences may be accounted for by differences in other resources available across the specified personality types (overcontolled, undercontrolled and resilient) such as social support, psychological flexibility and distress tolerance for example. Evidence-based interventions for such concerns already exist and it is unclear what the measurement of resilience may add either conceptually or in practice when considered alongside the fact that interventions designed to promote resilience appear to have few measurable and perceptible effects (Denning et al., 2014; Steenkamp, Nash & Litz, 2013).

(vi) Psychometrics; content validity. No information presented**.**

Internal consistency (including factor analysis). Internal consistency was investigated in seven of the studies, with maximum scores obtained in Study 6 (Green at el., 2014) and Study 9 (Greenberg et al, 2019). Green and colleagues examined the factor structure of the 25-item CD-RISC in a 94% veteran sample (N=1981), the majority of whom served in combat operations in the Middle East (86%). Exploratory factor analyses suggested a two-factor solution, with a follow up confirmatory factor analysis suggesting an acceptable fit for the two factors (adaptability in the face of challenges and self-efficacy). Estimates of internal consistency, were acceptable across the full sample for adaptability and self-efficacy (alphas of 0.91 and 0.90 respectively). In Study 9, factor analysis of the CD-RISC with a sample of homeless veterans revealed a one-factor solution. Similarly, across the remaining studies utilising the CD-RISC acceptable estimates for internal consistency were provided, however for the original five-factor version (Connor-Davidson, 2003). The factor analysis that were conducted, as mentioned, appear to raise questions around the suitability of the five sub-

scales of the CD-RISC in providing a valid measurement of resilience in samples of U.S veterans (Clark & Watson, 1995), and suggest the need for factor analysis to be performed if utilising this tool in veteran samples.

Criterion validity. As has been identified in previous methodological reviews of resilience (e.g., Windle et al, 2011), there appears as yet no current 'gold standard' of resilience measurement, a supposition supported here in the lack of evidence provided for criterion validity.

Construct validity. In Study 1, a maximum score for construct validity was achieved by Owens and Blackburn (2016) in a majority military veteran sample who had served post 9/11. Providing support for hypotheses specified in advance, resilience, as measured by the CD-RISC was found to be negatively correlated with PTSD symptom severity (as measured by the PTSD Checklist- military version; n= 191; Pearson r= 0.25, p<.01) and military rank. Officers were found to score higher on the CD-RISC than enlisted veterans (n= 191: Pearson r=0.20, p<.01). Officers may be more able to demonstrate and make use of individual resources such as personal competence and control than enlisted members of the Forces, who are perhaps more likely to be reliant on relational or systemic resources such as trust in leadership and adequate preparation for combat to demonstrate resilience, which are not measured by the CD-RISC as representative domains of resilience.

Across remaining studies adequate scores were obtained for construct validity as the direction of expected correlations were not specified in advance. The CD-RSIC was negatively correlated with measures of psychosocial difficulties, PTSD, and depressive symptoms, and positively correlated with post-deployment social support in Study 3 (Pietrzak et al., 2010) in a sample of OEF/OIF veterans. In Study 4 the CD-RISC was found to be negatively correlated with a measure of stress designed by Hourani and colleagues (2012) for the study, and positively correlated with social support in a sample of US Marines undergoing military

discharge . Interestingly, DeViva and colleagues (2016) in Study 8 also found a negative correlation between the CD-RISC and a measure assessing for positive beliefs about psychotropic medications and psychotherapy (BMP; Bystrisky et al., 2005) in a sample of post- 9/11 veterans referred for mental health care.

No information was presented for reproducibility, responsiveness or floor-ceiling effects over the eleven studies that utilised the CD-RISC.

Interpretability. Intermediate scores were attained for the CD-RISC (Pietrzak et al., 2009; Green et al., 2010; Greenberg et al., 2019; Elliot et al, 2015; Elliot et al., 2017). A consistent finding across studies was that miliary personnel classified as having PTSD obtained lower scores on the CD-RISC than those who were classified as not having PTSD (e.g., Pietrzak et al., 2009).

(vii) Other measures used. The Deployment Risk and Resilience Inventory (DRRI; King et al., 2006), The Deployment Risk and Resilience Inventory-2 (DRRI-2; Vogt et al., 2013), the 14-Item Resilience Scale (RS-14; Wagnild, 2009) and The Brief Resilience Scale (BRS; Smith et al, 2008) were used over the six remaining studies.

Overall quality. The highest overall score was five out of a possible eighteen for the DRRI (studies 12 and 13) and the DRRI-2 (studies 14 and 15).

(viii) Conceptualisations of resilience across remaining measures. The authors across studies 12 to 15 (utilising the DRRI and DDRI-2) took an ecological approach to understanding resilience, and utilised scales that assessed the situational risk and resilience factors relevant to military personnel (King et al., 2006). In developing the DDRI King and colleagues (2006), in Study 12, attempted to define both subjective and objective,

interpersonal and military mission-related variables that applied as risk and/or resilience factors for Gulf War veterans. The authors arrived at fourteen sub-scales assessing risk and resilience factors, reflecting experiences prior to, during and after deployment, that may have implications for the health and wellbeing of military personnel. Factors considered to promote psychosocial functioning, included sub-scale scales assessing for a calm childhood family environment characterised by close relationships, deployment and post-deployment social support. Factors that posed a risk to psychosocial functioning, included scales measuring the experience of prior stressors (before joining military), general harassment during deployments, and post-deployment stressors. As such resilience factors were defined in terms of social and environmental 'advantages', and risk factors as adverse experiences, or 'disadvantages' that may have featured across the lifespan for military personnel. A notable strength of the study was in the use of six focus groups representing men who had deployed, men who had been in the National Guard or reserves, female veterans and a mixed group according to predeployment duty, status and gender, able to generate a breadth of relevant risk and resilience factors. It is interesting to note that men and women endorsed different types of military stressors or adversity, with men experiencing more combat experiences and women endorsing more difficult living and working environments and sexual harassment. This may indicate differences in what might be required to be resilient for men and women in response to varied military adversities, such as the need to have access to regular breaks in combat duties, and robust systems of reporting and support respectively which suggests a need to examine how gender might affect the types of adversities faced both during military service and perhaps once service has ended.

In Study 14 Vogt and colleagues (2013) updated the DDRI to the DDRI-2 to account for the changing nature of warfare and military populations. The Gulf War, the deployment context accounted for in the development of the DDRI, was relatively short-lived for

example, while more recent wars in Afghanistan and Iraq have involved more sustained tours, with post 9/11 combat involving a pervasive element of terror (Ruzek, Schnurr, Vasterling & Friedman, 2011). Particular focus was given to expanding coverage of family-related risk and resilience factors due to ever-increasing recognition of the importance of unit/ family experiences in an individual's deployment performance (e.g., Bell & Schunn, 1999) and post-war adjustment to civilian life (e.g., Vogt et al, 2011), with scales added to measure unit social support, family stressors and post deployment family functioning. The sampling strategy involved oversampling of female veterans and National Guard/ Reservist personnel which may have allowed for broadening of relevant risk and resilience factors. Focusing on risk and resilience factors may, however, fail to adequately reflect or allow for how experiences of adversity or trauma 'steel' an individual to be able to manage future adversity (e.g., Schoon, 2006). Indeed it has been noted that the experience of adversity or trauma is a necessary antecedent to the process of resilience (e.g.., Bonanno, 2004; Windle, 2011; Schok et al., 2008, Palmer et al., 2016). By separating social- ecological resources (e.g., Ungar, 2003) and conditions of adversity into defining features of risk and resilience *per se* it may that the DDRI and the DDRI-2 risk reducing resilience to a feature of the environment. Such a separation does not allow for consideration of how environmental conditions (including or perhaps being defined by adversity) *interact* with resources in facilitating resilience (e.g., Ungar, 2013). It can perhaps, therefore, be said that while the DDRI and DDRI-2 may elucidate veteran-defined and relevant situational advantages and disadvantages (as generated via focus group data with military personnel), how such conditions allow for, limit, or create resilience for these veterans across their lifespans is not elaborated. Notable exceptions appear the scales examining social support which elucidate pathways that may underpin or lead to resilience in military samples. One example is in the experience of emotional support (e.g., "The commanding officer(s) in my unit were

supportive of my efforts"; "I am carefully listened to and understood by family members or friends").

Study 13 (Fikretoglu et al., 2006) and Study 15 (Maoz et al., 2016) involved the validation of the DDRI in a French-Canadian sample of veterans, and the DDRI-2 in a nonclinical sample of Israeli veterans following mandatory military service respectively. As such conceptualisations of resilience were not addressed *per se*. One strength of Study 15 is in providing evidence for the validity and reliability of the DDRI-2 in a differing culture where military service was mandatory and with a majority female sample (61.4%). It is important to note however that this was a convenience sample recruited from individuals employed from at a mental health centre or university which limits generalisability to non-nationals and veterans who may be unemployed.

Rice and Lui, 2016, in study 16, conceptualised resilience as positive adaptation in the face of challenges, further clarifying this as the ability to maintain or return quickly to a stable and healthy behavioural, cognitive, emotional and physical state. A healthy state was elaborated as a lack of pathology, in combination with the ability to maintain functional capabilities and social appropriateness (Schoon & Bynner, 2003). Definition of this 'healthy state' was informed by research with youth populations, and such a state may be defined differently in military samples. Social appropriateness, for example, may be of little practical utility in promoting resilience in military samples and indeed may be conceptualised very differently in relation to the demands of military combat and military life. The Resilience Scale (RS; Wagnild & Young, 1993) was originally created from focus group data, conducted with 24 older women, and validated in a sample of older adults (mean age 71.1) the majority of whom were female (62.3%) and educated beyond high-school level (66.2%). This produced a two-factor solution of personal competence and acceptance of self and life, which may be less relevant to resilience under the acute stress of combat. This research informed the

development of the shortened version utilised by Rice and Lui (2016) in this review (14-Item Resilience Scale; RS-14, Wagnild, 2009). As no information regarding the content validity or internal consistency/ factor structure of the RS-14 was presented in relation to its use in a military sample, it is not possible to understand if the measure usefully measured resilience (or what factors may have comprised it) in this sample. A strength of study 16 was in its use of two comparison groups (one veteran and one active duty) to allow for examination of potential differences between these groups. One example was the finding that demographic differences were found in resilience only for veteran samples with those who had served for longer and who had been in education for more years achieving higher scores of the RS-14. Higher education has been found to be associated with psychological and physical health (Hammond, 2003), however it is unclear whether education effects resilience or vice versa. Resilience increasing with a greater time in service may point to resilience increasing with age (e.g., Windle, 2011) or due to military experiences. This would be an important area for future investigation.

Elliot and colleagues (study 17), conceptualised resilience as personality characteristics that allowed military personnel to return from deployment reporting few problems with adjustment or distress. Certain personality 'types' were identified as managing better under stress, as measured by the authors own composite measure of 'resilient personality' which they hypothesised would be related to higher scores of their chosen measure of resilience. The BRS (Smith et al., 2008) conceptualises resilience as a unitary ability to ' bounce back' after experiencing stress. It was found that veterans with a resilient personality had higher bouncing back scores. However, when path analyses were conducted to ascertain any indirect effect of 'resilient personality' on psychosocial adjustment after traumatic brain injury via BRS scores, none was found. This may indicate the ability to bounce back may not be influenced by personality type or that personality type may not relate

to bouncing back when veterans experience the adverse experience of a traumatic brain injury. Furthermore conclusions were limited by the lack of predployment personality data, therefore is it difficult to claim that participants demonstrated a resilient personality type that predated military experiences. Moreover, with the cross-sectional collection of baseline data and potential mediators, such as self-reported resilience, atemporal associations among the variables assessed at baseline were observed precluding strong inferences about the mediating effects of variables such as self-reported resilience, social support and coping (Winer et al., 2016). Additionally generalisability was limited by a small majority male sample.

(ix) Psychometrics; content validity. In both Study 12 for the DDRI (King et al., 2006) and Study 14 (Vogt et al., 2023) for the DRRI-2, maximum scores were awarded for clear specification of measurement aim, working definition of concepts and involvement of active duty, reservist and veteran personnel in item development (as well as experts in the field of military risk and resilience). Maximum scores were similarly obtained via the use of veteran focus groups and translators to check items in the two studies that validated the DRRI and the DDRI-2 in non-US military samples (Fikretoglu et al., 2013; Maoz, Goldwin, Lewis & Bloch, 2016)

Internal consistency. Acceptable estimates of internal consistency were demonstrated for all measures across four out of the six studies. In Study 15, however, alphas ranged from 0.47 to 0.95 at Time 1 and 0.33 to 0.96 at Time 2, two weeks later over the seventeen scales of the DRRI-2. No information for internal consistency was provided for the DDRI-2 in Study 15 (Maoz et al., 206) RS-14 in Study 16 (Rice & Lui, 2016).

Construct validity. The DDRI-2 in Study 15 achieved a score of 2, as the authors specified hypotheses in advance. Subscales that assessed factors promoting resilience were found to be negatively correlated with measures of psychopathology. Childhood family functioning, for

example, was negatively correlated with the Beck Depression Inventory (BDI) (n = 101; Pearson r= -0.30, p< .01), the Beck Anxiety Inventory (BAI) (n = 101; Pearson r= -0.24, p< .01) and the PTSD Symptom Scale Self Report (PSS-SR) (n = 101; Pearson r= -0.40, p< .01). Acceptable estimates were attained for construct validity across the remaining studies (except for Study 17, where no information was presented), with measures of resilience consistently negatively correlated with measures of psychopathology. The RS-14, for example, was found to be negatively correlated with 'dysfunctional coping' including denial, substance abuse, behavioural disengagement, self-blame and venting, and positively correlated with emotion-focused coping in US military veterans (54.7% of whom had experienced active deployments; Rice & Lui, 2016).

Reproducibility- agreement No information was presented across the six studies.

Reproducibility- reliability. Reliability was explored by Fikretoglu and colleagues (2006) for the DRRI in Study 13 and for the DRRI-2 in Study 15 (Maoz et al., 2016). A score of 1 was awarded as the intra class correlation was not specified.

Floor/ ceiling effects. An intermediate score was awarded for the DDRI-2 in Study 14.

Interpretability. Subgroup data was presented for the DRR1 in Study 12 by King and colleagues (2006), by Maoz et at (2016) for the RS-14 in Study 16 and in Study 17 (Elliot et al., 2019), however information detailing the change in scores that would be clinically meaningful (MIC) was not defined. Rice and Lui (2016) for example found that veterans' resilience scores increased with education level such that those with a Masters or doctorate scored higher on the RS-14 than those with a high school education.

(x) Summary and discussion of the literature review. The first aim of this review was to examine how resilience has been conceptualised within veteran populations. Across the seventeen studies the most cited definition was that of resilience as traits or personality

characteristics reduced the risk of psychopathology after exposure to adversity. This definition was adopted universally across the eleven studies that utilised the CD-RISC, although with apparent variability in authors' own idiosyncratic specification of these traits, and research evidence cited to support these suppositions. Greenberg et al (2019), in Study 9 for example suggested social support, coping skills (Crush et al, 2018), self-efficacy and optimism (Benight & Cieslak, 2011) may be important dimensions of resilience, and in Study 3 active coping, cognitive flexibility, positive emotions and meaning were highlighted by Pietrzak and colleagues (2010). It is important to note that the evidence cited to support these traits or personality characteristics as being implicated in resilience involved studies differing in theoretical and empirical perspectives, often not with veteran samples. Evidence was cited, for example, from studies examining factors that might protect against childhood psychosis (Crush et al, 2018) and from civilians with a diagnosis of depression (Southwick et al., 2005). Feasibly aspects of resilience most pertinent to veterans may be different such as the ability to tolerate long periods of boredom or perhaps pain associated with occupational injury (e.g., King et al., 2006; Elliot et al., 2019). In addition authors' conceptualisations of resilience in veteran populations may not be well-represented by their measure of choice. Relational aspects of resilience such as social support for example, were mentioned by the majority of authors that chose the CD-RISC to measure resilience, as being part of what characterises resilience within veteran populations. The CD-RISC however does not measure relational aspects of resilience, in any detail other than one question asking to ask participants how strongly they agree with the statement "I have close and secure relationships". Given the reliance on each other for survival, particularly under combat conditions, (e.g., Barret et al., 2996; Green et al., 2010), it may be likely that social support is an important aspect of military resilience that requires adequate representation in measures that seek to assess resilience in such populations. Similarly the BRS (Smith et al., 2008) and (Wagnild, 2009)

do not capture social or environmental resources that may be likely to underpin veteran resilience. The DDRI and DRRI-2 (King et al., 2006; Vogt et al., 2013) were developed with military veterans and it appears that the scales assessing aspects of social support prior to, during and after military service, suggest processes by which such resources may foster resilience in military samples. One example, is through feeling understood and valued by family and friends. However, separating risk and resilience factors may not allow for consideration of other important aspects of resilience such as the ability to maintain competence in the face of adversity (e.g., Bonanno et al., 2005).

The second aim of this review was to explore psychometric properties of the scales utilised in military samples. The content validity of scales were not examined in veteran populations (other than the DDRI and DRRI-2 that were developed as measures of deployment-related risk and resilience factors). This means that these measures cannot be said to comprehensively represent or measure the construct of resilience in military veterans. Additionally the five-factor version of the CD-RISC was not supported in two separate samples of US veterans when factor analyses were performed. When these findings are considered alongside the highest overall score psychometrically being 4 (out of a possible 18) in Study 9 (Greenberg et al., 2019) with a sample of homeless veterans, questions appear to be raised as to whether the CD-RISC is the most suitable measure of resilience in these studies, and indeed more generally about whether the CD-RISC should be the measure of choice for resilience within veteran populations. The DRRI and the DRR2 received overall psychometric ratings of 5 across four samples of military veterans. While the content validity of both resilience promoting and risk-to-resilience factors represent a real strength of these measures in veteran samples, the question remains as to whether the measures assess resilience *per se*, or are better conceptualised as measures of (military) situational risk and

resilience. None of the measures examined appear able to assess *how* resilience confers positive adaptation in the face of adversity, or indeed *what* factors or resources are implicated in this process. This indicates a need for further empirical investigation of resilience in military samples, that is capable of elucidating what resilience means and how it might confer an advantage in the wake of adversity.

Furthermore it is difficult to draw conclusions regarding the relationship between resilience, psychopathology and psychosocial functioning in military samples other than to note that resilience, as conceptualised by authors' measures of choice, are most consistently negatively associated with psychopathology. As these measures may not be accurately conceiving of resilience, and therefore measuring it in military samples one cannot conclude that resilience in veteran populations is indeed associated with an absence of psychopathology after exposure to 'military trauma' just that the measures utilised across these seventeen studies are. Furthermore, it worth noting that the samples identified in this review often involved a mixture of active duty, reservist and veteran personnel, and no studies were conducted with UK military personnel. It is perhaps likely that resilience manifests differently and is supported by differing resources, be these individual, social or environmental, in the context of military and civilian life. Active duty personnel are located in military culture and may expect to continue to deal with military combat. Veterans are likely perhaps to be older and required to manage different adversities in the context and culture of civilian life. There may also be differences in how resilience is defined and expressed in UK veterans, and a paucity of studies thus far exploring this, indicating a need to explore resilience in samples of veterans of the UK Forces. Finally there appears a lack of cultural sensitively in the measures of resilience selected, particularly perhaps in their focus on individual level personality characteristics. These measures are not able to account for military values, training and social bonds in promoting the resilience of military veterans. As noted by Litz (2014)

defining and measuring resilience at the level of personality traits may place undue and unrealistic pressure on military personnel to 'keep themselves running' under combat conditions. When interventions that promote resilience training at the individual level are assessed, for example by attempting to 'amplify' personality characteristics such as optimism, no effect on the 'resilience' of military personnel is observed (Steenkamp, Nash & Litz, 2013). Such findings certainly indicate the need to identify further how social and cultural aspects of resilience may support the health and wellbeing of military personnel not least because, as this literature review has shown, personality characteristics may be neither necessary, sufficient or useful indicators of resilience in military personnel.

1.07 The current study

Overall the review highlights that research into resilience with military veterans requires further development. As yet it would appear no measure of resilience is capable of accurately defining and assessing the construct in a veteran sample, and that research is sparse and perhaps focused at the level of personality traits. Some strengths of previous research can be found in King and colleagues (2006) and Vogt and colleagues (2013) elaboration of how social support might be conceived in military samples and act to promote resilience across the lifespan of military personnel. The present study will seek to extend examination of the role of social support in promoting resilience. Furthermore, the present study will seek to address the gap in how resilience is conceptualised and understood by military veterans, the resources implicated in promoting it, and indeed how being a military veteran might affect resilience. There appears limited curiosity across research conducted with military veterans into their understanding of resilience and how it might be related to their psychosocial functioning. Additionally, considering resilience may be implicated in providing protection against the development of stress pathologies, it appears imperative to explore further what factors many do so and how. Such understandings may be able to contribute to a developing evidence base

(e.g., Green et al., 2010) seeking to promote accessible interventions, where required, that may help reduce the risk of deleterious outcomes after exposure to military stressors. Veterans will be defined for the purposes of this research as ex-members of the armed forces (the Army, Navy or Royal Air Force) who have completed at least one day of active service (Dandeker, Wessely, Iversen & Ross, 2006), including non-combat related deployments and roles such as 'peace-keeping missions'. Considering the unique nature of military service and culture, co-production is implicated as a methodology best able to ask questions in meaningful ways and to elucidate veteran understandings of resilience. Furthermore, the exploratory nature of the study and research questions lead naturally to qualitative exploration.

This study is interested in what veterans themselves conceive resilience to be, how they feel it has developed for them, indeed if at all, and how being a veteran has impacted on this process. It is hoped that the findings may offer some insight into resilience and how to promote it usefully and helpfully in situations where it may be difficult to maintain or develop.

2. Method

2.01 Chapter Overview

This chapter will explore and provide a rationale qualitative study, the methodology of co-production and the chosen technique for analysis. The development of the approach, methods and techniques for exploration of the research topic will be considered within the context of the ontological and epistemological positioning of this research. The research procedure will be considered in terms of participant recruitment, data collection and ethical implications. Finally researcher reflexivity and quality criteria for qualitative rigour will be considered with respect to current study and in relation to co-production.

2.02 Research Paradigm.

(i) Rationale for a qualitative approach for this study. A research paradigm can be thought of as a comprehensive model of scientific practice. It seeks to guide decisions made about which phenomena are relevant to scrutinise through observation, the types and structure of questions that should be asked of these observable phenomena, and how the results of any investigation are best interpreted (Thomas & Grzegorz, 2020). According to Guba (1990b) research paradigms can be characterised according to three interrelated concerns. Their ontology represents the definition of reality they ascribe to and their epistemology the what and how knowledge about this reality can be theorised. Finally methodology refers to the approach and procedures chosen to generate data, representative of the nature of reality and knowledge we are interested in examining.

The primary focus of the present study is to explore what veterans understand the concept of resilience to mean and how it may be relevant to their mental health and psychosocial functioning. A qualitative paradigm is implicated as an appropriate framework for the current

research, as such an approach seeks to understand knowledge in the context it was generated and focuses on the depth and meaning of data generated (Flick, 2013). Difficulties in defining resilience, in terms of antecedent (adversity), behaviour (resilience promoting) and consequence (e.g., obtaining higher scores on scale measures of resilience, or lower scores on measures of 'psychopathology') have been widely debated (e.g., Windle, 2011; Pangallo, Zibarras, Lewis & Flaxman, 2015). Current theories of resilience are increasingly based on the recognition that that resilience results from the interaction between individual and environmental factors (Rutter, 2006), and as such qualitative approaches are implicated to elucidate the lived experiences of participants and yet unnamed protective processes (Ungar, 2003). Within qualitative research there are a number of ontological and epistemological positions that are possible for a researcher to take (Willig, 2012), and these differing positions in turn lead to a pluralism of possible qualitative methodologies (Braun & Clarke, 2013). Ontological, epistemological and methodological considerations will be delineated in relation to the present research.

(ii) Ontology. Ontology can be defined as the study of being. It is concerned with the nature of existence and the structure of reality (Crotty, 1998). Ontological positions specify the relationship between the external world and human interaction and interpretation, with many possible perspectives regarding the contingencies of this relationship, which range along a continuum (Clarke & Braun, 2013). At one end of the continuum lies the ontological position of realism, which asserts that realities exist independently of the mind (Crotty, 1998), suggesting that a 'real' objective world exists without the need for human consciousness to interact with it. At the other extreme of the continuum lies the relativist position, which argues that multiple realties must be possible as we are never able to get beyond our constructions to a 'mind-independent' truth (Nightingale & Cromby, 1999).

It may appear that the present research would be best conceptualised through a relativist ontology to allow for exploration of resilience within the context of a 'veteran reality'. This position would imply that there is no single 'truth' in the definition of resilience and would allow for contextual variability in terms of antecedents (adversity), behaviours (resilience promoting) and consequences (e.g., the ability to maintain typical levels of functioning). To utilise a relativist ontology, however, may lead to the risk of what Bhaskar (2016b) describes as the tendency to reduce the world to our knowledge of it, termed the epistemic fallacy. Our understanding of resilience is indeed dependent upon the context in which we consider its definition, but its definition cannot be exhausted by conceptuality alone. Resilience may be conceptualised differently by a veteran sub-culture versus an alternative sub-culture such as athletes, however, for that knowledge to be considered valid or useful, it requires a foundation in an external reality (people's understanding of resilience is real). This position will be taken in the current research, representing the mid-point of the continuum between realism and relativism, termed the critical realist position (Bhaskar, 2016b). Critical realism maintains ontological realism by proposing that experienceable phenomena, such as resilience, are generated by underlying 'real' structures such as biological, economic or social structures (Willig, 1999). These structures can be seen as contributing to conceptualisations of resilience, but cannot be directly accessed when considering resilient outcomes, i.e., 'resilient behaviours'. Resilience, therefore, should not be viewed as independent of biological, social or economic structures, and different conceptualisations of resilience can be seen as historically and culturally variable ways of making sense of the underlying 'real' structures that may contribute to 'being resilient'. As Bhaskar (2016b) elucidates, critical realism posits that what we know about the world is necessarily abstracted through our minds. This suggests that realism/relativism dualism at an ontological level, may impose false dichotomies upon what can be known and how we can go about forming this knowledge, i.e.,

epistemology (Burr, 2003), which will in turn affect the choice of methodology used to investigate particular phenomena by particular researchers.

(iii) Epistemology. As mentioned, epistemology is concerned with the nature of knowledge and seeks to address the question of *what* is possible to know (Braun & Clarke, 2013). The nature of reality (ontology) influences what is possible to know and how meaningful knowledge can be generated through research practices. Broadly speaking epistemological positioning within research paradigms echoes the realist/relativist dualism evident at the ontological level. Epistemological positions can also be seen as falling along a continuum with positivism at one end and constructivism at the other (Braun & Clarke, 2013).

(a) Positivism. Positivism can be seen to run parallel with a realist ontology. If we believe that a real world exists independently of our own consciousness, then to create knowledge about this real world, we might assume a direct relationship between the world and our perception of it, i.e., positivism (Braun & Clarke, 2013). Typically, such an epistemological positioning would implicate empirical science as a methodology capable of generating knowledge that is both accurate and certain (Crotty, 1998). If the 'meaning' in objects or phenomena under investigation exists prior to human consciousness, then empiricist methods should be capable of removing the subjectivity of human consciousness, allowing for the discovery of the meaning already inherent in the phenomena under consideration. Traditionally such a model has been ascribed to within empirical science and quantitative approaches to psychological research, where, validity and reliability of measurement can be seen to provide confirmatory evidence for hypothesised relationships between 'real' phenomena. Quantifying phenomena, such as designing a scale for resilience, would allow comparison of individuals through their 'real' positioning along a scale and how this positioning may be related to another measurable phenomenon, such as having a particular mental health diagnosis. This, however, would not account for what individuals understood

resilience to be, only the items deemed to characterise resilience on a particular scale. Such a study would not be able to account for how groups of people may consider resilience to be relevant to their mental health and psychosocial functioning, only how a predetermined measure of resilience is related to a predetermined measure of mental (ill)health. The primary aim of the current research is to explore what veterans understand the concept of resilience to mean; a quantification of resilience would be unable to answer this research question.

(b) Constructivism**.** Constructivism can be seen to run alongside a relativist ontology, in that if there are multiple realities, we are at best able to construct knowledges of the world through our research practices. Our understanding of ourselves and other objects is produced through various political, economic and social discourses and systems of meaning within which we all reside (e.g., Geelan, 1997; Burr 2003). As mentioned, the current research could take a relativist/constructivist position, however, the risk may be that of epistemic fallacy (Bhaskar, 2016b). This has been conceptualised by Nightingale and Cromby (1999) as the failure to take into account the materiality of the world. Our experience of the wetness of water for example, is present in our discourses, be they cultural, linguistic or personal, however is not reducible to any of these discourses. We could call resilience hardiness, social support, or maintaining typical functioning in the face of adversity. We would however remain unable to account for the 'lived' sensation of being resilient in everyday life (Husserl, 1970). If we considered resilience to be a (social) construct than resilience could only be understood within particular systems of meaning. In this way we could account for a veteran understanding of resilience, but we would be unable to accommodate the reality of being resilient in the face of bloody warfare (Crotty, 1998). This highlights how a pure relativist/ socially constructed approach to understanding resilience may at best be open to academic debate around the nature of social realities, and at worse run the risk of further

marginalising under-represented minorities, such as military veterans. Such a construction of resilience could not take into account the embodiment of being a veteran, including experiencing warfare, and other personal-social factors such as racism, gender and disability, i.e., the diversity possible within any group, in this case veterans (Nightingale and Cromby, 1999). Furthermore, in seeking to remove the spectre of individualism, constructivism may be morally and ethically implicated in the failure to acknowledge the effect of power on our discourses (Johnston & Boyle, 2018). Power, although difficult to define, appears to exist in a material sense that is particularly relevant to the current research; armies exist, wars take place, human lives are lost. The failure to acknowledge the power of governments, dominant political and economic ideologies, and the inequalities that arise from those structural features of society may fail to adequately contextualise a veteran understanding of resilience. It would appear that unless discourse is situated in an embodied, material 'reality', any analyses from such methodologies may be paradoxically unable to address fully their own significance (Cromby, 2015).

(c) Contextualism. Contextualism is akin to critical realism (Braun & Clarke, 2013) and sees knowledge as emerging from a context. Contextualism ascribes to the view that knowledge can be valid in certain contexts, however, there is no one 'true' version of a context-independent reality. The present research will take a critical realist/contextualism positioning to approach the exploration of military veterans' understanding of resilience. A critical realist ontology allows for the acknowledgment of the context relevant in veteran conceptualisations of resilience and the role of individual experience and agency. Contextualism would imply that no single method is best able to get to the 'truth', however, that 'truth' is contextually bound but cannot be reduced to context alone (Tebes, 2005). It follows that there could be number of qualitative methodologies capable of providing a framework within which to conduct research into what veterans understand resilience to

mean. The ontological and epistemological positions detailed above would suggest there is no *right* or *wrong* methodological approach, rather what is important to consider is what or whose 'truth' am I interested in hearing when trying to explore veterans' understanding of resilience.

2.03 Co-production in Research

> "*Co-produced research can bring insights into emerging experiences from a grass-roots level…Survivor/ service user led research may start with different questions ensuring studies are ahead of the curve at times when agile responses are required for unprecedented situations "*
>
> *(Vera San Juan et al, 2021, p.5)*

In considering the methodological approach that may best allow for exploration of veterans' understanding of resilience, Braun & Clarke (2013) advocate for the need for coherence in the overall research design. The view that a reality exists, however we are only able to draw conclusions about the nature of this reality in abstraction through human interpretation and interaction, would appear to lead naturally to an epistemological positioning that privileges the veteran perspective. Taking this position within the current research requires a methodology and specific techniques capable of facilitating and encouraging veterans to express their perspectives on resilience and the relevance it may have on their (embodied) mental health and psychosocial functioning.

The tradition of co-production or 'user-involvement' within research has a complex history spanning across multiple disciplines and 'movements', implicating a variety of key stakeholders (Beresford, 2009). Seemingly, the work of Kurt Lewin (1940), the 'politicisation' of disability by disabled activists in the 1960s (Barnes & Mercer, 2013; Mercer, 2002), and the legal requirements for public participation in land use planning from the late 1960s (Croft & Beresford, 1992), provides a historical lens through which to view

participatory involvement. In addition, more general social and cultural shifts, such as feminism and the civil rights movements throughout the 1960s and 1970s, began to shape a generation's ideology (Atweh, Kemmis & Weeks, 1998). It appears that public awareness from around this time showed an appreciation of the role that race, gender, ethnicity and class play in the construction of knowledge and legitimising the holders of that knowledge (Brisolara, 1998). These various influences have contributed to the more recent development of user participation methods such as Participatory Rural Appraisal (PRA), Community Based Participatory Research (CBPR) and Participatory Action Research (PAR), particularly within the field of education (Atweh, Kemmis & Weeks, 1998) Similar trends could be seen in research within sociology and gender studies in the development of 'critical social research' during the 1980s and 1990s, which was specifically allied with marginalised groups (e.g., Truman, Mertens & Humphries, 2000). This development of user- involvement from differing traditions with varied topics of interest and terminology appeared to share many features. The focus of methods of data collection and analysis seem geared towards understandings that were outside the researcher's original frame of reference. As such, a parallel move in within research of this time seemed to be increasing use of interpretative qualitative methods. The appeal being that methods such as ethnography and grounded theory frame and give voice to new categories of knowledge based on local realities (Reason & Bradbury, 2001). Other themes evident in research seeking user involvement is the production of practical knowledge useful to people in their everyday lives, with an emphasis on political ideologies predicated on social justice concerned with the redistribution of power and wealth (Reason & Bradbury, 2001).

This tradition of involving the 'users' of research tended to mean institutions, organisations and agencies commissioning and making use of research that would allow for questions of

local importance and relevance to be answered leading to better local practice and stakeholder participation or productivity (Beresford, 2005).

(i) Development of co-production within the present study

The current research hopes to be able to facilitate and encourage veterans to express their understandings of resilience through co-production with relevant stakeholders particularly in design, analysis and dissemination. The current research has been developed and designed in collaboration with a third-sector veteran led organisation, providing support to veterans. This may include individual and/or group formal mental health support for veterans with diagnosed mental health needs, and informal support including 'drop-ins' and outdoor group activities. The researcher met with a veteran representative of the third-sector organisation to discuss the topic of interest. A co-production based approach to design was discussed and formalised with the involvement of a further veteran member of staff from the organisation. The researcher, two members of staff from the organisation, and two further stakeholders providing mental health input into the organisation formed a co-production panel. Meetings with the researcher and some members of the co-production panel took place between April and July 2017 to provide feedback on the researcher's proposal and collaboratively develop materials including demographic questionnaire and interview schedule.. A veteran member of the co-production panel worked with the researching throughout the study, helping with coding, sense checking themes that I identified and in reading selected sections of chapters in draft. A number of ethical issues appear to be relevant in the process of co-production of this study including ownership, authorship and accountability in terms of analysis and dissemination (McClimens, 2004). Such issues we be considered further in the discussion chapter.

(ii) Participatory Action Research

Participatory action research (e.g., Atweh, Kemmis & Weeks, 1998; Bradbury & Reason, 2003; MacDonald, 2012) provides a framework within which to operationalise the co-production aspect of this study, as delineated above. PAR has a rich and productive history in educational research, perhaps due in part to well-defined action orientated goals of improving teaching and learning practice (Whyte, 2012) and indeed access to education in marginalised groups (Cameron & Gibson, 2005). PAR, alongside other approaches to 'service-user involvement' in research, shares a focus on the production of practical knowledge that is useful to the community of reference. How PAR can perhaps be differentiated from other such approaches is through a second aim of conducting research that can contribute to social change and *action*. Some proponents of PAR place explicit emphasis on the predication of social justice and the redistribution of power and wealth as a 'political ideology ' that should be part of the motivating force for such research endeavours. (e.g., Reason & Bradbury, 2001;Chattern, Fuller & Routledge, 2007). Paradoxically while action research can be seen as an attempt to bridge the gap between research and application (Wells, 2000; Bradbury & Reason, 2003) in ethically driven ways, critiques of the approach tend to focus on its place as a theoretical description of how research should be done rather than as a practical research method (e.g., David, 2002). Furthermore, it would appear caution may be necessary in how one goes about 'doing' such approaches due to the risk of defining and 'doing social justice' *for* collaborators rather than *with* them. Perhaps at best such well-meaning attempts at redistributing power among traditional holders 'the researchers' and their arguably less powerful research 'subjects' runs the risk of recreating the very power differentials it seeks to address. Indeed it can be said that by seeking change for a group, even collaboratively, may be giving the implicit message from a place of power that responsibility for that change lies within the group. At worst it would seem to the researcher

that PAR could unwittingly recreate the very patterns of oppression it seeks to redress (Foulcault, 2007). One important question I therefore held in mind while developing a PAR-informed approach to co-production was whose (political) agenda did a need for social justice, and a redistribution of power and wealth arise from and for whose ends? Indeed whose definition of social justice, of power and wealth would be taken forward into the research? Reflecting on such issues prompted me to apply PAR in collaboration with a 'group' of veterans, with whom I had no personal experience of prior to the study so that my own ideas of 'the justice they needed' were not well-formed. I felt this might better allow me to be led by the group. Additionally, I was careful to attempt to collaborate with people whose potential experiences of marginalisation were different to those in my own life and those in the passage of my family's history. This was in the hope that my own experiences would not 'occlude' those of the participants and co-researchers, and I would be able to hear, see, feel and think my way through the project with them. Below I have included my reflections as recorded across my field notes while developing the present study in collaboration with the veteran co-researchers and participants. This can be seen as one example of the cyclic nature of PAR (e.g.,Whyte, 2012; Wadsworth 1998), whereby a problem, issue or desire for change is identified by the community of interest and various

iterations of planning, acting, observing and reflecting are entered into until all parties reach a form of consensus or the issue has been resolved.

The below has been informed from field notes taken by the researcher after discussions with the co-researcher. Content discussed with co-researcher and included with their consent.

Prior assumptions about the topic

I had an idea that resilience might be a topic relevant and important to veterans in terms of their health and wellbeing. I, however, without meeting with and asking the veteran members of my co-research panel, would have had no idea that the topic was indeed meaningful or how it was. I would not have best known what questions needed to be asked and in pursuit of what outcome. I thought from academic literature review that 'veteran resilience' was the 'opposite' psychological state to 'psychopathology' after exposure to 'military trauma'. I went into the research thinking that resilience may be important to consider in mental health provision for military veterans. Through the process of PAR, however, I realised the goals of the participants and veteran co-researchers in terms of change went beyond their 'mental-health needs' to the quality of the lives they had led and continued to lead once they had left military service. Being able to build resilience within civilian contexts in ways that were meaningful to them appeared vitally important to participants and the veteran co-researchers.

Co-researchers' assumptions regarding the topic of interest.

In meetings with the two veteran members of the co-production panel we discussed the topic of interest together. We shared our various viewpoints particularly while working together to develop the topic guide. I recall the veteran co-researchers telling me that there was something different about how resilience would be shown in the military context and in civilian life. At the time I don't think I had linked this to what potential participants who attended 'drop in sessions' were expressing in our conversations. They unanimously mentioned being part of a unit or having a collective mission was what allowed them to get through their military adversities, and this was something they felt was missing from civilian life. In later discussions with the co-researcher, during the process of analysis we discussed how strongly this idea of 'collective resilience' came our of participants' reports of what allowed them to managed difficult and even potentially traumatic experiences. This, the co-researcher noted was something they and the other veteran member of the co-research panel felt would the most important factor in how veterans understood and were able to be resilient. We reflected together how instead of explicitly sharing this assumption they worked with me in developing a topic guide that would be able to tease such issues apart, e.g. including a question about the differences in resilience shown in the military to outside of it.

2.04 Participants

(ii) Sampling method. Veterans were recruited through purposive sampling at the veteran third sector organisation and direct contact with ex-service personnel via online veteran groups. The researcher and one veteran co-researcher were responsible for recruitment in terms of emailing or discussing the advertisement and study information with veterans who expressed an interest in participating in the study. Recruitment efforts were focused on East of England due to time and budget constraints. It was hoped that a purposeful recruitment strategy employed across the region would provide a sample diverse enough to reflect the demographic variation within a veteran population. This variation was sought in the hope of facilitating potentially differing conceptualisations of resilience to be expressed (Sandelowski, 1995). Veterans that differed in terms of gender, age, socio-economic status, educational history, rank, amount of combat experience, number/location of tours during active duty and time since leaving the Forces were sought for participation.

(ii**) Participant Recruitment.** Participants were recruited from the East of England. In practice this may have impacted on the demographic make-up of participants. Census data from 2021 (Ethnic group, National Identity, Language, and Religion: Census 2021 in England and Wales-Office for National Statistics) indicates that county of Norfolk is comprised of the White ethnicity at 94.7% and the county of Essex at 90.4%. providing a context for the recruitment of the sample for the current study. The current sample was recruited from the East of England and 93.8% identified as White- British. Additionally 81% of the sample were male. The lack of ethnic and gender diversity recruited within the sample may have limited the variability in views expressed by participants in this study. It is important to consider, however that participants varied in age, length of service and time since leaving the military (see participant details in Results Chapter for more information). Such factors are likely to influence how resilience has been experienced and expressed, with

one example being age being linked to increased capacity for positive adaption (e.g., Harris, 2008; Kahana & Kahana, 1996).

At the time of recruitment 3 participants were retired, 7 were in work. Occupations included engineering, security work, off shoring, and working at a nature reserve. All remaining participants were looking to go back into work either through retraining, current volunteering or were off work due to recent discharge from military service or taking time off from their current roles. Six participants left education at aged 16. Ten participants identified opportunities to continue in education. Four of these participants pursued qualifications while in the military, including vocational, and university level qualifications. Six of them continued with education after leaving the military with four completing degree level qualifications or higher. The vast majority of the sample would be identified as 'rank and file' across the Army, Navy and Air Force (87.5%) for the duration of their time in the military. Two participants (12.5%) were officers, one of whom was promoted through the ranks during their time in the military. See Results chapter for further participants details, and discussion chapter for the potential implications of this sample on data collection and analysis.

(iii) Sample size. Sample size in qualitative research is often driven by the concept of data saturation, which has developed from grounded theory (Bowen, 2008). Saturation typically refers to the point at which additional interviews do not provide new themes (Morse, 2000). This is influenced by the scope of the research question and range of participant variables and experiences likely to provide sources of information relevant to addressing the research question (Sandelowski, 1995). Although there are no 'rules' for sample size in qualitative research (Patton, 2002), a sample including between 15 to 30 individual interviews is common in studies aiming to identify patterns across data, with Braun and Clarke (2013) further specifying that between 12 and 20 individual interviews would be likely to be

sufficient in a medium-sized study employing thematic analysis. In an example provided by Marshall (1996) of a study examining the relationship between GPs and specialists the author identified no further new themes after 15 interviews. A conservative estimate, therefore, of a minimum of 15 and a maximum of 20 interviews will be recruited for to allow for a data set of 'adequate size and breadth' to explore thematically what veterans understand resilience to mean. Of note is identification of such sampling as "theoretical" in that participants, in this case military veterans, are selected for their special attributes rather than accounting for sampling to be sufficiently large to be statistically significant (Yardley, 2000). Military veterans' understandings of resilience may, for example, be particularly relevant because of their occupational duties. Furthermore, seeking to sample broadly within this group may allow for elucidating experiences and points of view that appear divergent or discrepant (Charmaz, 1990), for example perhaps those of female veterans.

2.05 Research procedure

The following inclusion criteria were utilised in recruitment:

1. Ex- members of the armed forces who experienced active duty which includes non-combat related deployments/ roles, for example 'peace-keeping' missions
2. Individuals over the age of 18
3. Fluent English speakers
4. Veterans who have been discharged from the armed forces for any reason and with no limit on how long ago they were discharged
5. Veterans who have sought input from services and those who have not

The following exclusion criteria were utilised in recruitment:

1. Members of the armed forces still involved in active duty

2. Veterans experiencing a period of acute mental-health difficulty, defined by current utilisation of secondary care mental health services.

Following individuals expressing an interest in the study, they were contacted by the researcher via email, telephone or in person, and provided with the participant information sheets and informed consent form (See Appendix C for participant information sheets and Appendix D for consent form). The study was discussed to ensure they meet the inclusion criteria. Participants were given time to review the information sheet and consider whether they were interested in participating in the study.

Participants were contacted again after being given time to review the study information to asked if they would like to take part in the study, and if so, an interview, was arranged (date, location and interview method). Before commencing the interview, informed consent procedures were repeated by discussing the points made on the consent form, and asking individuals to initial and sign if they were still happy to participate. Time was given to answer any questions that participants had. Participants were reminded that their participation was voluntary and they had the right to withdraw at any time. It was explained that withdrawal would not disadvantage them in any way, or effect any clinical care that they might have been receiving. If they chose to withdraw their data would not be included in the thesis or any resulting publications, however no participants expressed a desire to do so. Confidentiality was discussed before proceeding with interviews.

2.06 Ethical considerations

Ethical approval was sought from the University of Essex Science and Health Faculty Ethics Committee. Evidence of approval of co-production and collaboration with the researcher from the third sector veteran organisation was asked for by the University Ethics Committee and submitted as part of the request for ethical approval (See Appendix E for University

ethical approval; co-production approval not reproduced in the thesis can be supplied if required).

Ethical issues evident in this study include the potential for participants to become distressed and possible safeguarding concerns in relation to vulnerable veterans (in receipt of support services for mental health or other physical disabilities) and any children they were in contact with. Furthermore, the right to withdraw, data protection and confidentiality were discussed thoroughly with each participant, checking that they understood, before commencing interviews. Finally, ensuring a safe environment for participants and the researcher was considered by conducting interviews in the third- sector organisation while other members of staff were present.

Although interviews were not focused on traumatic events that veterans may be have experienced, or their mental or physical health per se, it was deemed possible that an individual may become distressed over the course of the interview. Participants were reminded that they could take a break at any point, were in no way obliged to discuss difficult events or experiences, and could withdraw from the interview at any time. Participants were provided with the option to seek support from the third sector organisation as they feel it was required. If preferred, the researcher provided participants with the choice of a list of relevant local NHS services and/or the option of speaking with members of staff at the third sector organisation in collaboration with participants who wished for support with any distress they experienced. One participant become visibly distressed at points during the interview. They elected to continue with the interview and to speak with the veteran co-researcher in collaboration with the researcher at the end of the interview. Appropriate support was identified and actioned by the participant and veteran co-researcher who was additionally a member of staff at the third sector organisation.

The issue of safeguarding was considered explicitly on a case-by-case basis. The researcher's statutory duty of care was explained in that confidentiality may need to be breached in cases where there was evidence of significant risk of harm to the veteran, other members of society, or any children they were in contact with. It was explained that the researcher may need to pass information to relevant organisations, such as the police or social care, in such cases. Attempts will be made to inform individuals of the need to breach confidentiality before sharing information if this should be required, however, it will be made clear that duty of care will take precedence over maintaining confidentiality (e.g., Furey et al., 2010).

2.07 Data collection

Data were collected using face-to-face in-depth semi-structured interviews, between thirty minutes and one hour in length, with additional time to go through any questions participants had regarding informed consent or other aspects of study information.. Data collection included completion of a demographic questionnaire to collect relevant personal details, educational details and military career information (See Appendix F).

2.08 Interviews

Interviews were conducted within the charitable organisations. It was possible to conduct interviews on days when the veterans were attending support groups to reduce inconvenience and travel expenses. The researcher also provided participants with the option of taking part in interviews via Skype or telephone, which were not taken up by any participants.

Participants were offered a £10 high street voucher for their participation in the study. They were asked if they wish to receive a summary of research findings once the project was completed.

The interview topic guide was developed in collaboration with the two veteran members of the co-production panel. Initially the researcher presented ideas for overarching topic areas (the meaning of resilience, things that help in being resilient, barriers to resilience) and together the researcher and veteran co-researchers discussed potential prompts that may be useful. The researcher and one veteran co-researcher met again to finalise the topic guide including introductory information delineating interview process, describing confidentiality and presenting possible information relating to the word resilience (including dictionary definitions and wording provided the veteran co-researcher). This information (underlined in the opening paragraphs of the topic guide, please see Appendix G) was included on the advice of the veteran co-researcher after discussing whether all participants would be familiar with the word resilience. In cases where participants were not familiar with the word resilience the options for prompting information were agreed collaboratively and were presented as required on a case by case basis. In addition, the wording of prompting questions under each overarching topic area was developed and finessed with input from veteran co-researcher to utilise language that would be familiar and meaningful to veteran participants. It was hoped that by co-producing the topic guide in this way veterans were best able to understand the research topic area, and share their thoughts and opinions about what resilience meant to them.

2.09 Thematic analysis

Thematic analysis (TA) is defined as "a method for identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke, 2006; p79). Other methods that seek to describe patterns across the data were considered, however, such approaches tend to be tied to theoretical assumptions, which were deemed to be less coherent with the present research design. Interpretative phenomenological analysis, for example, is associated with a epistemological positioning that privileges the experience of the individual (Holloway and

Todres, 2003). While the present research sought to acknowledge individual veteran understandings of resilience, the primary aim of the research was to understand what a particular group of veterans understood resilience to mean. Therefore, seeking primarily individual-level detailed experiences of resilience would be unable to draw conclusions across the group, and may not be able to address how individuals felt resilience was relevant across differing domains evident in their lives. Furthermore in using a methodology of co-production it would appear a tension emerged in terms of whose interpretation of the data was privileged; was the researcher's view the most relevant and valid? Or were interpretations of other stakeholders, particularly veterans who were arguably less distanced in terms of experience from participants, more valid when brought to bear on a veteran understanding of resilience? Grounded theory seeks to construct theory from qualitative data (Bryant & Charmaz, 2019). As the topic of how veterans conceptualise resilience appears to be unresearched, this was felt by the researcher to be a less suitable method for analysis. Similarly, the potential for privileging the 'knowledge' of the researcher was not coherent with a co-produced methodology.

TA was chosen as it can be applied flexibly across varied theoretical frameworks (Braun & Clarke, 2006; 2013). Braun and Clarke (2013) stress the importance of researcher stating their theoretical positioning explicitly in order to apply TA with rigour. A number of decisions are advised which relate to the researcher's application of their ontology/ epistemology in how they go about analysing their data. The present research sought to foster an ontological position that was grounded in a material reality abstracted through how meaning was created by human consciousness (Willig, 1999). Therefore, the decision was taken to focus on descriptions of meaning across the data set in preference to a perhaps richer description of the experiences of each individual veteran. The data were examined in an inductive, or data-driven way in preference to a deductive or theory driven way, focused on

identifying semantic themes from the data in preference to latent or interpretative themes (Braun & Clarke, 2013). As the aim of the current research was exploratory, it would appear to make sense to focus more broadly on themes across the data. In addition, the methodology used sought to be collaborative and therefore it attempts were made to negate against the 'dominance' of researcher knowledge, however, in reality this was challenging to achieve in some respects. The exploratory and participatory nature of the research appeared to call for a data driven approach to generating and analysing themes across the data. It is noted, however, that the disconnection between semantic and latent or researcher-derived codes, which invoked both the researcher's theoretical and conceptual frameworks, is unlikely to be pure, possible or indeed the only aim of analysis. In practice codes and themes developed that included both elements, whereby the explicit content of what the participant said was interpreted through the lens relevant of conceptual and theoretical frameworks. It was hoped that such an integration allowed for veteran understandings of resilience to be contextualised by relevant psychological theories and frameworks in making sense of resilience, and indeed 'veteran concepts' brought to bear on the data through co-production.

Data analysis followed Braun and Clarke's (2006; 2013) six stage approach. Although TA can be conducted in a number of ways, this approach was chosen due to its accessibility and theoretical flexibility (Bernard, Wutich & Ryan, 2016). The co-production panel were taken through the method of thematic analysis by the researcher prior to becoming involved in analysis of the data. The methods chapter was shared and discussed to allow for members of the panel who contributed to the analysis to become familiar with the ontological and epistemological underpinnings of the study and approach to thematic analysis. Meetings were planned to facilitate this with one veteran co-researcher who contributed to data analysis.

(i) Phase one: Familiarising yourself with the data. This stage was completed by the researcher who transcribed the data verbatim and anonymised transcripts. The interviews

were listened to again for intention, tone and to clarify meaning. In doing this I was able to better connect with participants' views of resilience, to understand and 'hear' areas of importance in each interview and to better identify commonalities across the data set. In reading over transcripts I noted initial ideas for codes that related to what veterans understood resilience to mean, how they thought it developed and how being a military veteran impacted on this process.

(ii)Phase two: Generating initial codes. Initial codes were produced that reflected "the most basic segment or element of the raw data or information that could be accessed in a meaningful way regarding the phenomenon" (Boyatzis, 1998, p.63). Myself and my veteran co-researcher separately coded interviews (Please see Appendix H) and met to discuss similarities and areas of divergence. Through this process I think I was better able to start to understand and notice areas of the data that were important from a 'veteran perspective'. I needed to question and adapt some of my preconceived ideas of 'what I was going to find in the data', and appreciated the input of my veteran co-researcher in helping me to notice what I may otherwise have missed. Through our discussion of coding, and of the data more broadly, it was brought into my awareness that veterans were more sanguine, reflective and aware of their experiences of 'military trauma' than I had perhaps expected. Indeed an apparent challenge or risk to resilience across the data appeared a sense of loneliness and isolation in civilian society, which I may not have noticed without the expertise of the co-researcher.

(iii*)* Phase three: Searching for themes. Initial codes were sorted into initial themes, with sub-themes explored. I conducted this process and referred to my veteran co-researchers coding across a sample of five interviews (for selected samples of researcher and co-researcher initial coding refer to Appendix H).

(iv) Phase four: Reviewing potential themes. I created a table of initial themes that were developed into final themes (See Appendix I). Throughout this process I continued to check themes against the data set multiple times to see if they appeared to 'fit' well across the data and represent participants' views. I listened again to parts of interviews to help me clarify what participants stressed as important.

(v) Phase five: Defining and naming themes. I revisited data extracts to examine 'theme coherence'. I checked each theme across the data set, identified quotes and finally considered the themes together in consideration of the 'story they told about the data'. At this stage myself and the veteran co-researcher reviewed together my process of initial theme generation, across extracts of the data (please see Appendix J) and reviewed my table of theme construction. We then reviewed together how closely the content of themes appeared to reflect an 'accurate' representation of how participants understood and talked about resilience. We discussed areas of contradiction and differences of opinion within themes to come to an agreement about finalised themes. We also reviewed my suggestions for theme names and draft write-up of themes, as discussed below.

(vi) Phase six: Producing the report. I wrote up the themes in a draft report and this was reviewed with my veteran co-researcher. Through meeting to discuss theme construction and the content of each theme we were able to discuss illustrative quotes. Indeed through our earlier discussions of our independent coding, I had some idea of potential themes and/ or illustrative quotes from the point of view of my veteran co-researcher. We were able to think together whether I had taken this 'guiding coding framework' into account in my development of initial and final themes. I was surprised to discover little divergence in the identification and construction of final themes. The process of analysis will be considered further in the Discussion Chapter.

2.10 Reflexivity

This view would suggest that the researcher's own positioning, as defined by their 'reality' in context, is likely to have played a part in conceptualising and developing the present research, as will the positioning of panel members who co-produced the project.

This idea that the researcher's own values, beliefs and assumptions influence the way they undertake research tends to be well acknowledged in qualitative paradigms (e.g., Willig, 2012; Braun and Clarke, 2013). The researcher will seek to identify and acknowledge their values, beliefs and assumptions within the embodied context in which they developed, in the hope to bolster both the methodological rigour and ethical underpinnings of the current research. It is hoped that by acknowledging their own position in developing and conducting this study the researcher will be able to increase their own awareness of their position, perhaps of particular importance in the process of analysis. It may be that in seeking to turn their awareness back on their own potential biases, or being reflexive, the researcher may be better able to negate against findings that confirm their own views, rather than being shaped by participants' view (confirmability). This reflexivity may also foster a greater awareness of the voice of the researcher, and it is hoped that this will allow the researcher to be better able to recognise and mitigate against 'seeing' or privileging their own beliefs in analysis. In the case of the present research methodological co-production is also hoped to increase the rigour and ethics of the research by involving those who are arguably less distanced from the experiences of participants, in comparison to the researcher, throughout the research process. It is acknowledged that this will be difficult if not impossible to achieve in practice, the reasons for which will be considered further below from the position and perspective of the researcher. In addition, the positions of the co-researchers will be sought for consideration due to the collaborative nature of this project.

At the time of conducting the study I, 'the researcher' was training to be a clinical psychologist. I think it is important to acknowledge the power this affords me within the context of conducting research, perhaps particularly important to consider when co-producing research with those who have lived experience relevant to the phenomena of interest and may have accessed mental health services, including clinical psychologists, in the past. As I am writing this I am conscious of struggling with language, in terms of how best to reflect on my position as a researcher, while being able to recognise that those with whom I have collaborated with have also been researchers. I wonder if by referring to myself as 'the researcher' and panel members as 'co-researchers' I can clarify our differing contributions to the research process. Or it may be that my use of differing labels in some small way serves to highlight the power imbalance that is perhaps inherent and in my favour as a trainee psychologist, despite the co-researchers bringing an expertise by being less socially distanced to participants that I am unable to provide. I feel it is important to acknowledge my current position of power within the research process before examining the values, assumptions and beliefs that have I have developed within the context of my life that may be relevant to the conceptualisation of the current research.

It is likely that being a developing clinician will have shaped my understanding of mental health, distress, resilience and coping. In addition, my upbringing, ethnicity and cultural awareness are likely to also play a part in how I conceptualise potential risks and resilience factors relevant to mental wellbeing and functionality. As a British-Indian born in the UK with both my parents having emigrated to England by their early twenties, I can remember feeling awed by my parents work ethic and drive to provide me and my siblings with educational opportunities and the ability to be what I now think of as 'socially mobile'. Seeing my parents and my extended family work long hours to provide their children with opportunities they have not had themselves certainly has impacted on my conceptualisation

of adversity and what it takes for people to be resilient in the face of adversity. I am aware of beliefs that I have around resilience being related to social support, particularly family connections when I was younger and a tight-knit group of friends as an adult. I also am aware of the importance that has been placed on hard work and education throughout my life as a way to be able to continue to function through difficult life events and social and structural inequalities. Indeed, my appreciation for the adversity that my family members have experienced, at times continue to experience, and have been able to withstand has humbled and amazed me throughout my life, and provides a personal reason and strong motivation for wishing to explore the concept of resilience. I acknowledge that my understanding of resilience and adversity has developed within the context of my family's history with issues relating to cultural identity and immigration being particularly prominent, and it may be that a veteran population has differing conceptualisation of what could be conceptualised as adversity and resilience. I will reflect further on my own values and assumptions around resilience in relation to participants' understanding of the concept in the discussion chapter.

It is likely that my position as a trainee clinical psychologist will influence how participants respond to me in interviews, for example what they may feel 'safe' in sharing with me as a mental health professional with considerable power, not least in a statutory safeguarding sense. In addition my own beliefs and values around what resilience means for me is likely to influence how I frame interview questions, such as what aspects of participants narratives I notice, follow-up further, or possibly fail to notice or explore further. I completed a reflective log throughout the research process and wrote short reflective memos after each interview in an effort to notice my own beliefs and bias so that I could attempt to take account of influence of these as far as possible when conducting analysis (Appendix K).

2.11 Qualitative rigour

> *"We shall know a little more by dint of rigour and imagination, the two great contraries of mental process, either of which by itself is lethal. Rigour alone is paralytic death, but imagination alone is insanity"*
>
> (*Gregory Bateson 1980 p.233)*

The criteria for evaluating the quality of quantitative empirical psychological studies is well-established (although necessarily continuously evolving). By comparison, the relative novelty of qualitative methodologies as psychological research tools means that conventions and standards for conduct and evaluation are in their infancy (Yardley, 2000). It is an important observation to make that from the advent of systematic qualitative research in psychology, 'qualitative researchers' have attempted to articulate what represents good practice (e.g., Lincoln & Guba, 1985; Stiles 1993; Elliot, Fischer & Rennie, 1999; Yardley, 2000). Early formulations attempted perhaps to adapt traditional criteria (after Cook and Campbell, 1979). Lincoln and Guba (1985), for example, attempted to catalogue principles for establishing data creditability, transferability, dependability and confirmability which appear analogous to concepts such as ecological validity, generalisability, replicability and reduction of ' unsystematic error' such as researcher bias through procedures such as "inter-rater" checking of the coding schemes taken from quality criteria for quantitative research . As later iterations have developed authors have been more explicit in defending the pluralistic ethos underpinning the philosophy of most qualitative research, as is the case in the present study. The present study posits that an external reality exists independent of our theorising, abstraction and understanding of it, however, objective appraisal is impossible as our theorising, abstraction and understanding is profoundly shaped by our social, cultural and subjective perspectives, and by our activities and conversations. (Yardley, 1997a). As such no objective "truth" of what resilience means within a veteran population is assumed regardless of the (qualitative) methodology used to explore this topic. In line with authors

such as Yardley (1997a; 2000) quality criteria to assess this study are sought that allow for ontological and epistemological uncertainty required to facilitate co-production. It may be that various social and cultural aspects of 'reality', for example shape what veterans understand resilience to mean such as experiences of war trauma, however, it may be that other aspects of 'reality' that shape how veterans understand resilience have not been thought about by the researcher and may be brough to bear on the process of analysis thorough conversation and practices related to co-production. As such sensitivity to context, commitment and rigour, transparency and coherence, and impact and importance will be considered in relation to this study (Yardley, 2000). This criteria appears to allow for assessment of quality while retaining the flexible applicability required for assessment of an exploratory co-produced study utilising thematic analysis.

(i) Sensitivity to context. Sensitivity to context was considered in terms of how the data were 'located' in relevant theoretical underpinnings of resilience, and indeed how veteran perspectives on this 'locating' were able to broaden the theoretical scope brought to bear of the data. One example was in consideration of how veterans spoke of their emotional responses as part of their understanding of resilience. By being sensitive and noticing veteran perspectives on resilience the researcher was able to 'go further' than locating the data in 'researcher- generated' theories and integrate and develop current theoretical understandings by including participants' (and co-researchers') own views on what made veterans resilient according to their understanding and contexts.

(ii) Commitment, Rigour, Transparency and Coherence. These criteria correspond to the completeness of data collection, analysis and presentation of the findings of any kind of research, and can perhaps be viewed as the usual expectations for empirical research of any kind. When applied to qualitative methodologies commitment represents engagement with the topic, development of skill and competence with method of analysis and immersion in

relevant data. Rigour represents completeness of data collection and analysis . This has been addressed through consideration of what might represent an 'adequate sample' in terms of its diversity, most notably, to supply all the data required about veteran understandings of resilience for a complete analysis. The criteria of transparency and coherence relate to cogency and clarity at the level of presentation. The quality of the analysis in terms of its construction of a meaningful reality which readers will recognise as meaningful to them.

This criteria has been further addressed through triangulation of findings (Mathison, 1988)). This term as used within social science research is most often taken to refer to the examination of the research topic from two or more distinct viewpoints (Flick, 2018)

The present study has sought to balance out the subjective influences of individuals on the process of data collection and analysis through the use of multiple co-researchers. As noted by Campbell and colleagues (2013) in the case of early-career contexts such as with the present study, the reality tends to be that of a single person available for data collection and analysis. Through utilising co-production the researcher and veteran co-researcher were both involved in recruiting the sample. In this way any subjective influences I might have played in this process were balanced by those brought by the veteran co-researchers thus increasing the 'validity' of the process of data collection and analysis. I conducted interviews and sought to triangulate this data with reflexive writing (please see examples relating to PAR and co-production above), discussions with co-researcher colleagues and informal meetings at drop in sessions with potential participants. While the primary researcher conducted interviews and transcribed the data, the veteran co-researcher and thesis supervisors provided further triangulation as a way to 'validate' findings during the analysis process. It was attempted to apply this triangulation systematically across the data via interrater coding (O'Conner & Joffe, 2020). One thesis supervisor, the researcher and the veteran co-researcher independently coded a section of an interview. Areas of agreement and

difference were discussed by the researcher with thesis supervisor and veteran co-researcher to reach joint decisions in an approach described as "negotiated agreement" (Campbell et al., 2013, p.305) who noted that this strategy increased reliability of their coding frame from 54% to 96%. The veteran-co-researcher then coded a section of five interviews, chosen across the data set. This was purposive on the part of the researcher due to the veteran co-researcher having relationships with some participants via the third-sector organisation. These interview transcripts were not shared with the veteran co-researcher in order to maintain confidentiality. Again a consensus was reached in coding across these five interviews, discussed with thesis supervisor for further triangulation, after which the finalised coding frame was re-applied across the entire set of interviews (MacQueen et al., 1998). Due to time constraints around the project in addition to unforeseen events of the pandemic member checking was not conducted.

Coherence is concerned with the "fit" between the research question and the philosophical position taken, the method adopted and the analysis undertaken. The inclusion of the researchers perspectives on what might have motivated this research and on their own biases and views that may be 'confirmed' through the process of analysis provide starting point for evaluation of analysis against the perhaps inevitable balancing of the researchers voice, influenced by noted assumptions and biases, with that of the participants and also co-production panel members in the construction and presentation of the data analysis.

(iii) Impact and importance. This can feasibly be seen as the decisive criteria against which any piece of research is critiqued and is concerned with purpose of analysis, its intended applications and the community for whom the findings might be deemed relevant. The use of co-production can be seen to represent particular opportunities for the researcher to engage with topic of interest and develop, refine and produce a meaningful analysis that may have useful practical implications to 'relevant communities', including and most importantly

perhaps military veterans. How this quality criteria relate to and can be applied to the present study will be considered further in the discussion chapter.

Finally, it is important to note that analytic methods continue to develop. Throughout the course of this study Braun and Clarke (2019, 2021) have continued to clarify and refine their method of thematic analysis. Such developments as they apply to the present study will also be considered in the discussion chapter.

3. Findings

3.01 Chapter Overview

This chapter provides results to answer the broad research question "what do military veterans understand resilience to mean"? Results are presented to explore thematically veteran understandings of resilience, how it develops and what impact being a military veteran might have on this process of development. The next section presents participant details, the following elucidates the process of co-produced analysis and finally identified themes are presented.

3.02 Participant Details

The participants included 16 former servicepeople (10 were ex-Army, 3 were former Navy, 2 were Marines and 1 was formerly in the Royal Air Force). The interviews were carried out between October 2017 and August 2018. All participants identified themselves as White-British, other than 1 who indicated they did not wish to comment on their ethnicity; thirteen participants were male, 3 female; were aged between 32 and 83 (mean age 53); had been in the Forces between 4 and 42 years (mean 13 years) and had served in various capacities (2 during peacekeeping missions and 14 experiencing between 1 and 4 tours of duty across The Falklands, Northern Ireland, The Gulf, Bosnia and Iraq or Afghanistan). Participants had ended their military careers between 1 and 42 years previously (mean 21 years). At the time of interview all were residing in the UK. Six identified with a formal mental health diagnosis and all were involved with the veteran organisation that this study was co-produced with in some capacity. Eleven had previously attended the organisation for some form of formal (including psychological intervention) or informal support (including via veteran organised internet groups), 2 were involved in facilitating activities at the veteran organisation and the remaining 3 were recruited via social media.

3.03 Co-produced data analysis

Initial coding was conducted by the researcher with input from veteran co-researcher. Initial codes were organised into potential themes across the data set by the researcher, informed by the co-produced coding. These initial themes were tabulated and reviewed for coherence across the data set, after which themes were named and their content defined by the researcher. Theme construction was reviewed with veteran co-researcher and initial write up of themes was 'verified'. The four identified themes reflected our exploration of what veterans understood resilience to mean and then shifted focus to how they thought it developed over time, and in what form or stages. A final theme explored the impact being a veteran had for participants on the process of developing and expressing resilience. Through ongoing discussion between researcher and veteran co-researcher themes were further developed and refined, with linkages identified in the written summary. Finally the researcher finessed and completed write up of the analysis as below (please refer to Appendices H-K for details and reflections of the process of co-produced analysis. Please see Appendix L for reflections on the process of co-producing the analysis with veteran co-researcher).

Table 4: Details of sample

Pseudonym	Age at enlistment	Ethnicity	Most recent Deployment	Military Role-	Years since leaving	Formal mental health diagnosis
Matt	18	White- British	Afghanistan	Army	5	Y
Tracy	19	White- British	Afghanistan	Army	1	Y
Bill	16	Not Specified	Northern Ireland	Army	36	N
Pete	17	White- British	Germany	Army	27	Y
Paul	16	White- British	The Falklands	Navy	30	N
Tom	17	White- British	The Gulf	Airforce	25	N
Jake	18	White- British	Afghanistan	Navy	9	N
John	16	White- British	Borneo	Army	42	N
Nicola	19	White- British	Bosnia	Navy	17	N
Stuart	16	White- British	The Gulf	Army	20	N
Peter	15	White- British	Northern Ireland	Army	37	Y
Darren	17	White- British	Northern Ireland	Army	27	N
Billy	21	White- British	Iraq	Army	5	N
Simon	18	White- British	Northern Ireland	Navy	28	Y
Kate	21	White- British	Bosnia	Navy	20	Y
Timothy	18	White- British	Northern Ireland	Army	13	N

3.04 Identified themes

T/S	Theme and subthemes (T/S)	Number of participants
T	**Adapting to the adversity**	**13**
T	**It takes time**	**13**
S	A slow process, involving learning	
S	Recognising and managing emotional responses	
T	**Depends on your social group**	**16**
S	Finding material resources	
S	Group membership	
S	Support and belonging	
T	**The role of the military**	**16**
S	Military training	
S	Experiences and identity	

Table 4: Themes and subthemes relevant to how military veterans in this sample understood resilience
(T) Theme
(S) Subtheme

(i) Adapting to adversity

Out of the sixteen participants, thirteen identified resilience as the need to adapt to challenges faced. For example Tom commented "if you're just doomed to just repeat the same process over and over and again and you're not learning and you're not adapting and you're not being resilient". These participants stressed the need to adapt in ways that promoted functionality, in line with research that conceptualises resilience as the maintenance of occupational and social functioning after exposure to loss or trauma (e.g., Bonanno et al, 2004). Central to the notion of functionality was the goal or aim participants had after experiencing a particular loss. The loss of military employment and the challenges related to the goal of finding alternative employment within a civilian context was mentioned by all as an adversity that defined resilience:

> So I think resilience for me was, especially when I left the forces, was…is a case of finding a route to errm (pause) employment, you know. I know where…where I needed to be, but I "how do I get there? If I follow this one route, I need to branch out, I need to get context, I need to"…so yeah I

> think resilience to me was the ability to change and adapt to what was going on around me, not what's necessarily set in my brain, where I want to go, so how do I get there? What routes can I take? (Jake).

Furthermore, as noted by Jake above and by nine further participants, adapting to adversity may involve changing your current approach to account for the 'cultural norms' of your current context. For example, Nicola noted in relation to finding work and managing challenges within a civilian context "I have a good think about it, and I sit and be with it for a bit, and I… I don't just react now".

In addition, Paul, Nicola and Jake emphasised the importance of individual appraisal of adversity as something "expected", manageable and "part of life" in promoting resilient adaptation regardless of the situation-specific context.

> Life happens you're born, you live and you die and you just have to in the middle of all that, just take things as it comes, and just, just be relaxed about it […]. So don't fret the small stuff, and most of it is small stuff you know (Paul).

These participants highlighted how individual skills were key to adaptability, however, all commented too that how best to apply those skills required an appreciation and understanding of the nature and context of any adversity.

Twelve veterans mentioned adaptability as promoting individual functionality in ways that were also helpful for those close to them. Pete highlighted the need to adapt in ways that modelled effective coping, for his son as, "I want him to learn from me really…and I don't want him to learn bad habits and bad ways of coping". Veterans noted that part of adapting was being able to understand the impact this could have on their immediate support networks. For example, Darren explained how he decided to adapt his employment to take a less stressful role in order to spend time with and lessen the impact of this stress upon family members:

> I thought I was going in there because I have to make money to pay my mortgage, to keep my family going, you know it's having that realisation hang on I'm causing more stress to my family by going in and coming home in the state that I was coming home in 'un them worrying about me

> than I ever will do not doing that anymore[…] I'm retraining at the moment. I may get less paying job but I won't be putting them through stress any more (Darren).

Five participants thought there was a limit on being able to adapt to adversity whereby "when things happen all at once… when they hit you all at once it's harder to get on with things" (Billy). Matt, Bill, Stuart, Darren and Simon all commented that having to manage adversity while also prioritising family members was challenging. All mentioned that when adversity had affected their working capability, such as following the death of a loved one, or when work was the context for adversity this led to knock on effects of financial and housing concerns which could build up and "get too much for people" (Simon).

Finally one participant noted that resilience was required for adaption throughout life but noted that this could be in relation to "bad things….good things" and further noted that when life goes smoothly resilience ebbs, indicating adversity as a necessary antecedent for resilience:

> Life does throw these curve balls at us… and sometimes some really good things. There's even good things, you know, sometimes you need to be resilient to because if we become so built up with having all these nice things happen to us…and we expect them all the time…and when something does go wrong we're not able…to cope (Tom).

(ii) It takes time. Two subthemes were identified within this theme, as elaborated below.

(a) A slow process involving learning Thirteen participants thought resilience was a process that developed and changed over time, "It takes time to get over things…to get from zero to being resilient could take a long while, could take 10 minutes, it depends on what it is" (Peter). All participants mentioned resilience could be learned and had increased over the course of their lives, supporting literature that suggests resilience can be learnt and developed rather than being an innate part of one's personality (e.g., Hildon, Smith, Netuveli & Blane 2008). Ten participants elaborated age as an important factor in managing challenging circumstances by virtue of having time to develop useful skills "you just learn stuff as you go

along you know" (Paul) and practice through facing a greater number of challenging situations:

> If you go through a period of your life when bad things keep happening you kind of get used to it, get used to the drill, and so you […] start looking at this and saying "I can allow this to beat me again or am I going to allow the situation to… to… to keep me in this place of misery or am I going to take control" (Nicola).

Participants noted explicitly that resilience represented an interaction between the experience of adversity and of learning ways to cope and move forward i.e., that experiencing an adversity was necessary but not sufficient for resilience to manifest and it was individual responses that allowed for 'resilient outcomes'. For example, John highlighted the need for perseverance in the face of challenges emphasising the need to work hard to find opportunities, not expect them to present themselves to you, and indeed be able to do this even at times when your self-esteem is low:

> I've been made redundant 3 times so again…errm…(sighs) […] Eventually I decided well there's only one way to do it then, you go to somebody and say come on I can do that, give us a job. So, err there we are…that's…you…you don't expect the world to owe you anything, get off your backside and go and...and…and do it. That's very, very hard when you are feeling that I just want to crawl away into a corner (John).

Bill, Paul and Jake noted a particular ability of "not stressing" and not focusing on the "niggling things" playing an important part in some individuals being able to develop resilience more quickly and in a way that required less mental effort than others. As mentioned, however, all veterans noted the importance of the nature of an adversity in determining how individual protective or promotive factors, such as mindset were usefully expressed as part of the process of resilience. Again, drawing on the idea of resilience as something that can be learnt rather than being an individual personality trait, Bill notes, "you've got to approach different things in different ways".

Central to the consideration of how resilience develops was the severity of the adversity with more time required for resilience to be possible after experiencing more challenging

situations, with all citing transition from the military to civilian life as an example of this. The participants noted the need to change their existing approaches and skills, identifying the need to slow down "adjust", "formulate" and "reintegrate" upon leaving their military roles in order to become resilient which required differing skills such as being reflective in considering themselves, their goals and aspirations for the future, and perhaps their relationships:

> When I first left the Marines, I was in debt, heavy debt, managed to clear that when I left with my money I got….err and start afresh. And then it was all about the money, the money […] the money, money, money, you know. Now…now it's ten years on, it's like…I've been divorced…what is money…what is happiness? So yeah…so I think things have got a little bit deeper over the last year or two, since going through my divorce and everything as well, that…what…maybe I just need to enjoy things a little bit more than what I had done. Stop chasing the…the ever-increasing goal of…of what though? To get a big pot of money, to get a fantastic job title, to what, you know? So yeah I think I'm happy where I am now and that may be why I've eased off the gas a bit…because things are ok. (Jake)

Participants mentioned the time required to appreciate the differing priorities and experiences within civilian life and how these impacted on and required modification to existing strengths. One commonly cited example was that of particular social skills like "banter" and "humour" being key in the process of resilience within a military context, however, seeming less important and "misunderstood" within a civilian one. This lends some tentative support to the notion that coping under PTEs such as military deployment, may necessarily involve strategies and behaviours that are less effective or even 'maladaptive' in other contexts (Bonanno, 2005; Bonanno & Mancini 2008). Indeed, learning to adapt within a civilian context to 'civilian stress' was commented on by all participants:

> I remember it really clearly they said to me […] how do you manage stress… and I… and I laughed at that first off that was my first response I laughed…(laughs aloud)…I laughed… because you know, it's like 'did you just little recruitment person sat in your seat just ask me that?!… have you read my CV'… and then secondly I said that "well… my natural response was well look I don't see why people get so upset about their train being late when, you know, that's not really… that's not really nothing compared to the missile coming towards you"[…] I immediately related it back to my day-to-day job […] and I said "I don't remember or I don't care whether your tube is late I've been dealing with much more important stuff than that"… And… and 'course in hindsight I see that it came across all wrong… and, you know, and I had you know… not bridged the gap between my military life and my civvy life very well at that

> point…and of course I didn't get the job… Because they were like yeah… they…they…they actually said to me "you're not going to fit into the office. (Nicola)

Of note are attempts by all participants to 'fit resiliently' into the civilian context. The surprise and perhaps incredulity upon encountering civilians' lack of understanding of military roles and hardships was shared by all participants, as indeed were attempts to understand why this might be. All participants noted the severity of military trauma, the "unique" nature of combat and how this has appeared to create a distance from civilians, which will be elaborated further when considering military training, experiences and identity (theme four). Jake and Simon identified the need to "check- yourself", and temper the "banter" as it "doesn't mean anything to civilians". They stressed the need to find employment, and to take time to understand conventions that when not adhered to may cause those around them to experience stress, even when these veterans did not experience these situations in a similar way i.e., as potentially or actually adverse. Bill, Paul and Timothy provided the example of negative feedback from managers within a workplace context, and Tracy commented on mistakenly parking in someone's allocated space when first moving to a new home and being "shouted at". "I went over with some chocolates[…] said I won't be parking in your slot anymore[…] it was ok to first do an apology on my behalf wasn't it…wasn't hard".

All participants highlighted the need for support from others during times of adversity as a vital prerequisite to resilience. Ex-military colleagues were identified as playing a crucial role with four mentioning the reaction they received from civilians being somewhat different and characterised by "not understanding". Four veterans identified how other people reacted to their attempts to develop resilience and cope with adversity played a major role whereby the process could slow down or even 'reverse' due to the reactions and opinions of those around them. This was particularly evident in civilian workplaces when they were struggling

to manage in a way that effected their functionality in combination with a psychiatric diagnosis:

> They sent a letter that was dated the 19th of January[…] I thought, me being naive, I thought they'd sent me a birthday card […] I opened it up and it was just a generic letter… Dear X I hope that your recovery is going well and as of the 7th of March you will be on half pay…and that was it. I actually got to the point there where I had thought like the doctor said "it's a New Year, it's a new start you're gonna be alright this year"… I'd actually got to the point where I thought 'yeah you're going to be alright'….and I thought 'yes I'm….I can go back to work and I won't be beaten by PTSD'. And then soon I got that letter it set me right back, and I thought 'is that all I get…after all those years' (Stuart).

The identification of resilience as a process is in line with what Richardson (2002) termed the "second-wave" of resilience research. Veterans identified the interactive nature of resources at individual, relational, group and societal levels in promoting resilience, and in addition highlighted the importance of time, practice and the situational context of the adversity itself in necessarily defining and constraining this process. For these participants it seems accessing and maintaining group and societal level resources, such as adequate employment and supportive social relationships, may play a greater role in maintaining their resilience over time than their individual personality characteristics or traits.

(b) Recognising and managing emotional responses, "Stop to think about your emotions". Thirteen participants commented on the importance of attempting to manage their own reactions to adversity as fundamental in resilience. Twelve were unequivocal in noting that this involved a process of learning to identify, manage and regulate their emotional responses (Efklides, 2008; Jäger & Bartsch, 2006). All noted how being able to do this was vital in communicating with and interacting more successfully in the context of civilian life, and with their loved ones:

> I just completely…completely shut 'em out. I didn't wanna…I didn't wanna talk to my wife… well I did…I did want to talk to her but I just felt if I did speak to her I'd say something wrong or say…I'd…I'd…instead of getting to the point of thinking I'd say something I'd just shut off completely and just don't bother. And that's the same with the kids…like I didn't bother engaging with the kids 'cause I knew all I'd do is rant and rave at them anyway.[…] Now…now I've got that…I've got that ability to be able to just think about things a bit more before I start just ranting

> and raving…I know if I'm getting stressed out I can 'ave a 5 minute break out on my own, and then go back and play with 'em. Or if I 'ave got a problem with the wife, I now know I just talk to her about it instead of just closing off…an that just works so much better...being able to speak instead of just shutting down (Matt,).

As indicated by Matt above, these veterans elaborated that recognising their emotional responses was an active process of connecting with themselves which took time, effort and practice. It is important to consider this within the context of military roles and responsibilities whereby the "mission came first" there was "a job to do" and the nature of combat meant you "couldn't outwardly show emotion […] couldn't panic" (Jake). All veterans showed an awareness of how their time in the military, by virtue of such occupational duties, had necessitated an ability to "shut down" their natural emotional responses at times and "put 'em in a box and sit on them" (Tom), noting that in a combat situation you "didn't have the emotion tied to it " (Kate) you might have a moment of "Oh God what's happening" (Nicola) but you had to carry on with your job regardless. All noted the potential life and death nature of combat with Tom articulating the very real possibility of a friend being shot, of witnessing that and having to "leave him". "You don't want to be sat there having a meltdown balling your eyes out…err…so you have to physically turn off your emotions […] you've got a job to do, and that's what you do."

Ten veterans made the explicit connection that in needing to be able to manage the specialist requirements of military operations, they had been able to develop some skills that were necessary, possibly at the expense of others. Being able to "act quickly" under pressure to be "decisive" and to "trust your gut" and have confidence in your ability to make the "right decisions" were identified as skills from the military context useful in coping with challenging circumstances while they were occurring. By contrast the fast-paced and potentially life-threatening nature of the adversity faced in military situations meant that other skills such as "self-awareness" including "noticing how you feel" and "what to do with it"

were necessarily less developed, and identified by participants as being vital in dealing fully with an adverse experience, i.e., in being resilient:

> I don't deal with it… I work with it as opposed to dealing with it if that makes sense […] because dealing with it would mean putting it to bed… Which I would love to be able to do… I hope I'll be able to do that soon… But…what's that word that I want… being able to cope with it and put that face on is different to having dealt with it and knowing that you know how to deal with it. (Kate)

Such observations echo studies that have identified resilience and coping as distinct constructs (e.g., Campbell-Sills, Cohan & Stein, 2006; Vliet & Jessica, 2008). Resilience as identified by these veterans involves meta-cognitive abilities including appraising the demands of a challenging situation, and recognising how the adversity may affect you afterwards, particularly in the need for recognising and regulating affect, which allows for resilience to develop as a slow and considered response, with coping on the other hand identified by ten of these veterans as a faster and more reactionary response (Fletcher & Sarkar, 2013). In addition, four veterans noted that it was difficult to manage their emotional responses and therefore their attempts to manage adversity had involved the converse of keeping "busy" so that emotions did not start to "creep in":

> I mean from December last year till about August this year...I had a really bad bout of depression and then…dunno work started getting busier and…I dunno…I just started doing more stuff in general…just doing more instead of sitting in the house moping […] have to keep yourself busy, that's what I think (Pete).

These veterans identified mental-health diagnoses as being related to difficulties managing emotional responses, and the potential utility of professional input as helping them start to notice and manage responses they may have been "masking" or had only been possible to identify "in retrospect". All, however, identified experiences within the context of 'civilian-designed' mental health services that perhaps complicated the process of understanding their emotional responses both in a general sense, and specifically in relation to traumatic events that may be prioritised in psychological interventions for PTSD):

> I've had, not flashbacks as such…more they might be flashbacks…thing is who tells you what a bloody flashback looks like? But erm…erm more challenging thoughts…disturbing thoughts…disruptive thoughts (Tracy).

The participants identified some success in symptom recognition and reduction through evidence-based post-traumatic interventions focused on fear memories (e.g., Ehlers & Clarke, 2000; Shapiro, 2002):

> Having had that therapy I can talk about it now, it still bothers me, but not as bad as it did… That has helped, that is really good. When she first told me about it I thought no… I don't mean to be disrespectful but I don't think that's gonna be very good for me. And she said, oh give it a go… And after doing a couple of times I thought actually yeah….it doesn't last for long but after a couple of days it starts to come back again… But now it's like yeah I can talk about stuff, whereas before I couldn't talk about things and I tried not to even think about it… which is honestly the wrong thing I know now (Stuart).

Matt, Tracy Stuart and Pete all however, noted this success was limited and significant time was taken to convince them of a diagnosis with jargon perhaps failing to capture the phenomenological experience of PTEs as highlighted by Tracy above. In addition, veterans with a mental health diagnosis identified a differing understanding of terminology taken to signify psychopathology at times. One example provided was the requirement for hypervigilance as part of their military roles and the surprise and confusion experienced when hypervigilance was characterised within the diagnostic criteria for PTSD (American Psychiatric Association [APA], 2013). Matt stated "hypervigilance" as "for me […] doing my normal day to day thing that I'd be doing when I was in the Army".

Additionally, all participants commented that being resilient required recognising emotions and developing skills which were often not directly associated with potentially traumatic memories or events. Tracy, for example, highlighted struggling most "If I don't get on with people and I can't work out why", a sentiment echoed and elaborated by Pete, Tom, Jake, John, Nicola, Stuart and Peter in relation to the challenging process of "adjustment" to civilian life. They identified the need to work hard to manage their emotional responses when they felt civilians "did not understand military experiences" and may have "judged"

them, or at times when "people think you're faking it" in relation to struggles with mental health within civilian workplace environments. Seven of these participants felt the loss of their military job roles keenly and all continued to feel linked to their military friends and colleagues, both of which perhaps impacted their mental health and ability to fit into civilian life at times. All identified this as something that provoked strong emotional responses that were important to manage. Furthermore, when military colleagues' mental health appeared to deteriorate upon transitioning to civilian life, and help and understanding was not forthcoming, a type of vicarious alienation appeared possible for these veterans:

> I've done it you know, I've come back and…and it's normally years and years later, years later all of a sudden you have a few beers and all of a sudden you think, my god! It's all so…it's not here anymore…what happened to him, and he's done this, and you think fuck….how am I still in one piece you know…but you are. You know, but I think for guys…if you'd been helped a little better when you came back, things could have been a bit different (Jake,)

All veterans noted that when such experiences came to the forefront of their minds, having "time and space" to process their own emotions was key with mention of wanting to "protect" civilians. In addition, eight veterans noted the need for self-awareness in being able to "sit with" and regulate emotional responses, which allowed for acceptance of difficult emotions and increased resilience by increasing individual agency in being able to react differently at times under conditions of adversity:

> Stop and think about what you are doing when you respond to things […] It's not that you're going to solve the problem of your traumatic experience and your PTSD… But once you get control of other aspects of your emotional life, you might find that it helps in those areas. […]You know we talk about mental health… but you know… a lot of what traumatised… what traumatises us a lot is emotions and the way that we automatically have an emotional response to things… But actually if you stop to think about your emotions… Have a think about it…get to know what are your automatic responses… is that actually the best response… Is that the way you want to respond… sometimes it isn't…(Nicola).

All veterans noted that if they did feel the desire to discuss military experiences in order to resiliently move past them, they felt this was something best done with fellow servicepeople. Eleven of these participants expressed the value of discussing traumatic material with others

who have had similar experiences, fostering "trust" that was required for disclosures to feel "put to bed".

These veterans' accounts indicate that factoring in and manging emotional responses is a necessary part of resilience, with Tom, for example, highlighting that being able to develop skills in this area took him "20 years". This indicates that developing emotional responses may be a key part of interventions that seek to support veterans to improve their mental health, general wellbeing and psychosocial functioning particularly once they have left their military roles.

(iii) Depends on your social group. Three subthemes were identified within this theme.

(a) Finding material resources

All sixteen participants indicated resilience was contingent on the social group that people belonged to. They stressed the importance of this group structure in providing avenues towards the resources required to facilitate the development of resilience. Consistently, as highlighted across every theme, the need for adequate financial resources and housing were identified as necessary resources in resilience, and fifteen out of the sixteen participants noted how this was provided for within the structure of the military:

> The pay was great (laughs) sounds strange to say this considering I was only, I joined aged 17 and I left aged 25 basically… erm… In them years I never wanted for anything because all my accommodation was paid for, all my food was paid for […] You went to the cookhouse most days the food was kept there ready for you. Any pay… anything that went into my bank account was spending money (Darren).

As noted by these fifteen veterans "worries" such as "being in the red" were not experienced in the same way prior to leaving the military. As elucidated by Tracy "you've always had bills to pay and stuff…but you've had a wage come in, even when you were sick you had a wage come" and further stated:

> It's a bit of an uncertain time for me, you know…at the end of the month I no longer get paid….but I get a pension….but it's like a third of what I normally get. That's a big drop to think

> about when you've got a mortgage to pay and everything else to pay for….so that's the scary bit will I actually be able to survive on my pension if I don't get a job…and if I can't then what happens to the house? (Tracy).

All fifteen of these participants thought their 'basic needs' were provided for completely by the military structure, and upon leaving their roles, there was a need to find these resources independently and to negotiate for them within the structure of civilian society, which may involve "working out where you want to live your family […] where your income is coming from" (Billy) and needing to deal with "banks" and "mortgage people". Tom, John, Peter, Darren, Billy and Simon further commented on how the military environment ensured any health needs were catered for as "being the best you can be" was a tenet of military life and occupational duty. Simon noted that when transitioning to civilian life he had been able to access "education bits" as provided by the military, however noted:

> There's no other helpful, you know, finding a dentist… doing your doctors, you know all of that sort of stuff. I haven't got hold of [..] my medical records yet […] It's finding all of those resources. There's bits they can do, but there is no easy way. And that doesn't help people's resilience when they come out. You can see how many people why they struggle where they haven't got any support […] I got to a point about a year after I left where I was sort of struggling, with money and all the rest of it. But I had friends who looked after me, and my family… And I imagine not having that network, you can easily go down the route of drinking, drugs…

All these veterans, including Simon above, mentioned how difficult adjusting to civilian life was for them, with an associated decline in their mental wellbeing, even when support was available. This period of "self-doubt", "loneliness" and dealing with "lost friendships" was identified as manageable over time, only in the presence of other close and trusting relationships. These relationships were readily identified by these veterans as being dependent on their social context, for example for Simon involving membership within supportive family and friendship groups.

Ten out of sixteen veterans commented further and specifically on struggling financially and how this made it difficult to be resilient, and as identified by Simon, having friends and family who were able to provide social support and material help made such struggles more manageable at times when they occurred. All of these veterans identified risks to their

resilience, general wellbeing, and the ability to make ends meet without such support. Matt, Pete, Bill, Peter and Simon noted the loss of military structural support, identity and occupation on top of money worries had the potential to lead to "drink and drugs" and accruing "debts" while feeling "alone with it". Indeed the time taken to adjust to civilian life and access work and accommodation as required, particularly when families and friends within the civilian context were not able to help, may be one reason why military ties remained strong for some veterans. Pete commented on this as "a kind of network of friends… people that you don't even know that will help you anyway purely because you're an ex-squaddie". Furthermore, the longevity of these military bonds was commented on by Peter even after leaving miliary life:

> If I haven't spoken to them for two to three years […] it's you're alright…yeah I'm alright 'un that's it. But if I was to phone them up and say I've got a problem here and whatever they'd be on the way…and I'd do the same for them…all right coming down to help.

For the ten participants who mentioned money worries, and indeed for all sixteen participants, their military colleagues were people who they identified having got through extreme adversity with and as noted by Timothy therefore being people he continued to know could "get the job done" under challenging circumstances. This may suggest veterans are particularly resilient to traumatic stress by virtue of their military training and experiences (Litz et al., 2009; Litz 2014), which will be explored further as part of the final identified theme.

(b) Group membership

All participants commented adjusting from the military to civilian context involved a change in terms of their self-identified group membership (Tajifel, 1978; Turner, Brown & Tajifel , 1979). This was made easier, it appeared, if other salient aspects of group membership, such as experiencing a sense of belonging within other long-established groups such as with friends or family were part of individual veterans' pre and post-transition milieus. Four

veterans specified that their families were instrumental in providing "understanding and love" (Simon) and a "stable" environment, which they felt connected to before, during and after their military service. Nicola commented on the importance of being able to balance and hold differing aspects of your social identity at the same time in order to "relate to your family and friends" and in terms of military experiences "not allow those things to alienate you from your own kind of tribe, which happens to a lot of people". Feeling connected to their friends and families was noted as an important aspect of their resilience due to the need to provide support as well as receiving it when times were challenging "my daughter comes first […] I would do anything for her" (Kate).

Eight veterans commented on how difficult it was to adjust to their self-identified group membership away from a military one both during and after their service:

> If you can picture being married then going on away on deployments of six months… you're away doing your job looking after your mates, your mates looking after you, and you rely on them for life, and then it's your away from your family for six months…you have always got them in the back of your head. You come back and you're so distant from them and you have to relearn how to integrate back with them again. (Billy).

As elucidated by Billy military deployments appeared to create close bonds of friendship and interdependence due to sharing experiences that family were necessarily unable to be any part of. For some veterans this may have contributed to difficulties in feeling connected to family and civilian life after their military careers ended, as commented on by Matt:

> While you're in the army you are just a group of lads and all your problems are group problems as such […] cause you've all gone through the same things so […] like I say you just get on with it cause everyone is getting on with it. Where then…when you then come home and you're sitting there with your family and they don't have the same problems that everyone else seemed to have when you were in the army…..you think "hang on I am different from everyone else around me"?

In addition, all commented there was confusion in attempting to recalibrate to civilian norms, most notably around personal interdependence Triandis and colleagues (1988):

> You become really super engaged with the people who are around you…errm even people who you don't normally get on with, you become, you know, very close to and you rely heavily on, not so much yourself, but you rely heavily on others (Tom).

This level of interpersonal dependence is something that is perhaps not required in civilian society where "everyone is doing their own thing" and does not have a "common purpose" as under military conditions. These differences in interpersonal norms were noted by all as making adversity more difficult to manage within a civilian context and all appeared conscious of a confusion in how best to manage and deal with interpersonal differences within civilian life at times:

> In the army…in there…you get on with it, sort your differences out, then you move past it. Somebody else out in regular life, civilised… hold more of a grudge… so it's a bit harder to move past stuff (Billy).

All appeared conscious of times they had inadvertently caused offence, often within civilian workplaces where there seemed a lack of cooperation when compared with 'military collectivism' as commented on by Bill. These veterans identified continuing to think and "worry" about these experiences and continuing to be affected in their responses for a considerable period of time after leaving the military:

> Then at work… Yeah I could lose my temper, or be prone to just going I don't want your job (laughs) which I've done quite a few times before… But I've learnt, you know… that's probably you know not the best approach (Nicola).

Finally thirteen veterans highlighted the need to develop themselves personally in order to be able to 'fit better' within the civilian context by learning to manage alone, particularly according to more individualistic civilian subcultural and interpersonal group norms, as commented on by Tom, Nicola and Billy. It is important to note that all sixteen veterans, even those who noted benefits of civilian life and other supportive group identities that fostered a more 'individual resilience', continued to maintain their military connections in some way after the end of their military careers.

(c) Support and belonging

All veterans identified a prolonged period of adjustment where they found it difficult to relate to the majority of civilians, even in cases where there were longstanding close relationships with friends and family:

> How can you relate that to people when you go back… when your friend says to you "did that ship you were on have a swimming pool on it?"….You know, you know so you're dealing with that level of ignorance… How do you convey to people the fear… the smells, the chaos […] you… you…yeah…(Nicola).

Furthermore, thirteen veterans spoke of differences in civilian life in relation to forming bonds of friendship, noting "it's not that easy to have friendships like the army one when you've left" (Billy) in terms of connection, "way of thinking" and finding people that will do things for others "without any thought of personal gain" (Tom). The nature of military deployment and of getting through "extreme hardships" was identified by these veterans as creating a collective sub-culture which appeared to have shaped their values. Differing values in civilian life were commented on by all these veterans, whereby people perhaps considered and prioritised their own needs first, whereas these veterans considered it important to consider the needs of relevant others at all times such as friends, family and work colleagues:

> It's all your mates around you. All your mates are there to support you, to bring you back a sandwich and a brew […] and on civvy street it doesn't work like that. You know you get some guy in an office and he sort of starts to get a bit wobbly and people say. "Keep away from him, you know" You shouldn't be keeping away from him, you should be going over to him and saying "Are you alright mate. What do you need, what's wrong?" You know, that's what…that doesn't happen. (Bill).

These differences were pinpointed as particularly challenging to adapt to. Consequently transition from military to civilian life may be a tumultuous time of decreased resilience, not only due to the need to search for material resources, but also in terms of searching out sources of support and a sense of belonging that felt meaningful:

> Civilian life tends to be a little bit different, because […] you can pick and choose who you want to be friends with…you can pick and choose where you want to live, you can pick and choose what job you want to do. Erm…. so while that can a benefit, and […]really good for your resilience it can also be a negative thing for your resilience, because errm… you know you could turn round and find yourself just constantly changing because, you know, you know….err especially ex-military people, we're constantly trying to look for that support of like, groups, and networks of people, or putting yourself in those environments where you used to have all of that support. Errm… and…and now you tend to be more on your own in civilian life, so you're… you're…. you're tending to find yourself having to be more resilient on your own and…err… errr… and finding relationships, and dealing with relationships on your own, whereas in the military you just one big collective really, you know, bit like being in the Borg (Tom).

(iv) The role of the military. There were two subthemes constructed within this theme.

(a) Military training

All participants identified that their occupational roles and experiences within the military necessitated resilience. Military training was specifically focused on building resilience, and as commented on by Jake, participants believed this training would both prepare them for the challenges of military combat, and allow them to manage any impact of these challenges independently. "Maybe some people do need to talk about things…errm…but does that lead me to think, you know, that their training didn't prepare them for what they were going to see…to get involved with". Furthermore, fourteen participants further elaborated that resilience was "expected" to manage the challenging nature of military life in a way that was not emphasised or perhaps necessary for resilience in the face of civilian challenges:

> Civilians they don't have that problem, they don't have that sort of bravado to uphold…that…that do you know what I mean…errm […] and you'd look at civilians, who've had mental health problems and whatever…that's ok no problem…there's no-one…there's…you're not in an environment where it's expected of you to carry out these things…these, whereas in the military it is. It's…it's expectation so I think the difference is military is…is you're expected to be resilient. For civilians it's ok, the help and care is there if you're not" (Jake).

This expectation of resilience may have some potential risks, including a lack of support for those who might struggle to maintain their resilience during occupational service as noted by Jake and supported by the observations of Litz (2014) while helping to prevent PTSD in active servicemen experiencing military trauma. This was elaborated on in various ways by

six further participants who similarly drew attention to the potential negative implications of military trainingand identity. Stuart noted that this assumption of resilience stemmed from a "macho culture" propagated from entering the military, throughout training and beyond, and that this prevented those struggling from talking about it and from seeking help. He further identified the risk of peers perpetuating the notion that anyone struggling was "weak" and commented "I was proper…probably a bigger part of that than anyone" throughout his time in military and civilian occupational roles that he identified as sharing similar cultures, although noted he was "dead against it now". Military training was identified by Darren as promoting various myths, and he noted that perhaps this was made easier by the military standing in and replacing existing family structures in what he described as a "poacher family":

> It doesn't really exist but it's a myth that you know "if you ever need any help we are always here for you" the reality is they're not… But you believe it because you want to believe it. You're still the same on the outside… You know I mean… it's not until you step outside until you realise how big of a circle of friends you have that have nothing to do with the […] army. You know when you step away it was then I realised how many friends I actually had and when you're in you don't really realise because you're linked in (Darren).

On thinking about their military training, some veterans noted it was a specific type of resilience, that was expected, targeted in military training and reinforced throughout their military careers. Kate identified this resilience as "cracking on" and "putting a wall up" and commented about a specific naval trauma:

> Three of us went ashore and two of us came back, and we were taught just to get on with it. And I think that's the first time in my life that I've ever had to try and get over something.

Other veterans commented similarly on the "discipline" trained into them, necessary to meet requirements of their military roles in the context of rapidly developing combat situations. One example of such a situation was highlighted by Tracy during her military career; "people have died but you have to get on with the next job". The "fight" and "will to live" (John) that

these experiences engendered was commented on by all participants. Tom elaborated on the role of military training in developing this "instinctive" resilience:

> The scenarios we would play in training, and stuff like that are designed, you know. You're walking along, right…right boom, right he's now blown up, legs flying off everywhere…errm. "What you gonna do"? You know, the environment that you're put in, you know […] "Coming this way, what you gonna do", you know? Errm yeah there might be a bit of goofing about, but when you really think, the way that they'll push you and the way that they'll structure it is such a way that you're being trained constantly to switch off. Constantly to turn round and, you know, make those mental decisions to turn round and not be affected by what you've just seen[…]. You know, what would normally be…err…errm a humanitarian response to something…no…no…no we can't have that, we don't need that you know…that's not healthy for what we need you to do, which is, we need you run over that hill and go and bayonet somebody, you know. So…you…you…you know, you know you're conditioned to be that way.

Indeed, all sixteen veterans commented on their military training providing them with skills that were specifically tailored to the demands of their occupational roles and which, by definition, set them apart from civilians:

> You're trained to do a really difficult job. More difficult than most people think. We are trained to pick up a gun and shoot someone […] Right? You're not normal, if you can do that you are not normal. You are not the guy who works down the road in the bank. You are not the guy who works in the guitar shop or anything like this you know. (Laughs), so yeah you're gonna have a different way of formulating life. (Bill).

These veterans, similarly to Bill were conscious that their military training marked them out as different to civilians by virtue of being able to perform occupational duties necessary for combat readiness, such as wielding a gun in the knowledge that you may be required to shoot another human being. As noted by Bill there is perhaps a cost implicit in this, such that you are no longer 'normal' within a civilian context according to civilian norms. Furthermore, as highlighted by Kate "getting on with it" after the loss of a military colleague was her first experience of managing a bereavement. Many of these veterans joined the military in their late teens and early twenties, a developmental period normative for identify formation and self-exploration (Mobbs & Bonanno, 2018), which may explain the continued strength of the military identity in fostering concrete subcultural and personal norms that continue to play a role in how resilience is defined once people leave the military such as "ending up in security jobs" (Tom), "staying behind my resilience wall" (Kate).

(b) Experiences and identity

All participants thought their military experiences allowed them to become resilient in the face of PTEs, which they all identified as providing them with a "willpower" useful in managing all challenges, even at times when they were at their lowest:

> You still got that army programming in your brain to just get on with things. That's the…I think that's the only thing that really do keep you going […] I could say my wife and kids but I've got to the point there where I couldn't even give a toss about them… I just wanted to be left alone and carry on as I was 'cause I didn't see I had a problem (Matt).

At the same time, as highlighted by Matt, the ability to keep going allows you survive difficult experiences, however, this approach may mean you fail to reflect on your own reactions to the adversity such as noticing "a problem". The potential pitfalls of this type of 'military resilience' was noted by five further participants in various ways including thinking "Oh I don't need anyone's help…I'm really, really strong…I'm really, really good, I can power through" (Tom) or not understanding when you might need to "turn in on yourself" and "contemplate" a difficult experience to understand how it might have affected you or when you might "need to talk to a friend".

Four veterans, including Tom, noted that when their military service ended they became aware of aspects of resilience required to manage both 'military' and 'civilian' adversity that required skills that were not part of military training, particularly regulating emotional (Gross, 2011) and cognitive processes (Nolen-Hoeksema, Wisco & Lyubomirsky, 2008) as explored in earlier themes. Fourteen veterans spoke of how they were able to manage their military adversities but were much less prepared for 'civilian stresses'. All identified the ending of relationships as a 'non-military' source of stress that they were perhaps less equipped to manage:

> My first marriage actually broke up when I was still in the military, and […] that affected me quite badly, and I was then drafted out […] and I had one daughter then. It was difficult to see her and then it became more difficult… There was a few incidents out there that I'm sure had some effect… I've never explored it… was overwhelming…overwhelming with the emotions of my

> marriage breaking down, and not being able to see my daughter […] That side *(military side, added for emphasis)* I could cope… but I couldn't cope with the emotional home life problems (Simon).

Four veterans explicitly noted benefits associated with being able to focus on themselves more, such as choosing their work, developing their emotional and reflective skills and of being able to relate better and have more time for their loved ones, as mentioned and explored in earlier themes. All fourteen, however noted that they continued to miss the military comradeship, particularly close emotional bonds that were not possible perhaps to re-create with civilians who did not understand their military experiences:

> They were ma friends but they wanted to be, they were….I dunno if it was their way of trying to… errm help me out with different things and stuff like that. So, they would try to fill the… err…the void with that connection. But it was, it was like trying to ram a square peg through a round hole, it just didn't fit, you know. While they were really great friends… errrm… I could never engage with them in the same way, I could never open up in the same way (Tom).

The experience of combat leads to close emotional bonds between unit members (Mobbs & Bonanno, 2018), a sentiment noted by Tom and echoed by other veterans. Indeed all participants noted a reliance on their military unit (social group) for survival and guidance while in theatre which was instrumental in the ability to be resilient under combat conditions:

> There's always someone there to cover your arse to make sure everything was ok. Err, so yeah, I think there were points, in that…in that initial…err tour where resilience was pretty low, and I did look at other guys for inspiration (laughs)…as a young man, you know (Jake).

As highlighted becoming a serviceman involved experiences that sought to create a military identity, whereby individuals were dedicated to their organisation (McGurk et al,. 2006). Such beliefs may later, upon more considered appraisal and scrutiny, be found to be lacking or inaccurate. One example is the belief that the military will be able to continue to support individual servicemen and women once they had left service. As noted by Pete, Bill, Darren, Billy, and Tom access to "pensions" and "housing" were strictly controlled through a process of assessment and allocation by the military, on the basis of length of service and reason for

discharge, often involving the discretion of military- employed medical professionals. This system was identified as not best able to account for or consider the needs of individual veterans in the eventuality of medical discharge:

> When I was discharged I was […] given the rock bottom discharge which I think was a one-off payment of £1500 pounds. And British Legion took my case and fought it, and it was raised to 60% disablement […] yeah, get a war pension and initially they errm… underpaid my war pension, they were only giving me £50 a month, and it should have been a lot, lot higher than that. I did get a nice little lump sum (laughs) backpay (Tom).

Such processes were identified as stressful and challenging to manage, with a direct impact on resilience. This was perhaps particularly the case when veterans did not leave their careers through choice "still wanted to be there with everyone" and when support they may have expected from the military as an organisation was "not there" to help smooth the process.

4. Discussion and Review

4.01 Chapter Overview

This chapter will develop and appraise the findings from the co-production informed thematic analysis in the context of the study's research aims and the literature outlined in Chapter 1. Specifically the results are discussed in relation to how resilience has been defined and operationalised generally and with regard to military veterans. How the broader sociocultural context impacts the development and expression of resilience will be considered, particularly in relation to group membership as a military veteran and civilian. This chapter will also consider the strengths and limitations of study design, including co-production. Gaps needing further research will be considered. Finally the clinical implications of this study will be considered and presented.

4.02 Overview of findings

(i) What is resilience; Adapting to adversity

In answering the broad research question "what do veterans understand resilience to mean"? our findings demonstrate a complexity in veterans' understanding. Previous literature suggesting that resilience is necessarily preceded by the exposure to adversity (e.g., Bonanno, 2004; 2008, Windle, 2011) is supported by our findings, however, much of the literature examining resilience in military veterans appears to examine resilience in relation to exposure to traumatic events over the life course, and most consistently and notably, combat exposure (e.g., Hourani et al, 2012, Green, Calhoun, Dennis & Beckham, 2010). This literature tends to define resilience as a predictor of mental health with higher levels of resilience associated with lower levels of 'psychopathology' in military veterans who have experienced combat. Hourani and colleagues (2012), for example, hypothesized that higher follow-up levels of self-reported anxiety, depression and PTSD among veterans who had recently left military

service would be associated with higher levels of military combat exposure and lower levels of resilience, as measured by The CD-RISC (Connor & Davidson, 2003). Their findings, however, indicated that resilience was only associated with mental health problems when functional impairment was included and not with combat exposure. In addition, resilience was found to be positively correlated with social support and age, and negatively correlated with (current) stress. The authors, therefore, suggested that resilience may be better conceptualised as a predictor of functioning and the ability to carry out everyday roles and responsibilities regardless of any psychological issues, or emotional distress, rather than as a predictor of mental health problems per se. These findings have clear applicability to the experiences of British ex-members of the Forces in this study who stressed that resilience required functional adaptation in the wake of adversity. Furthermore, functional adaptation for these veterans was consistently related to the challenges of transitioning to civilian life including the need to change their approach to "not what's necessarily set in (my) brain" in order to account for 'civilian norms of functionality'.

Participants indicated further that, for them, resilience had limits and when "things happen all once" across multiple life domains "it's harder to get on with things". A previous study found that 44% to 72% of veterans experienced high levels of stress during the transition period, regardless of whether they had PTSD or not (Morin, 2011). Stressors reported included difficulties adapting to the lack of structure in civilian life, legal problems, difficulties acquiring employment/ interpersonal difficulties during employment, conflict within family relationships and broader interpersonal difficulties (Morin, 2011). Such findings support the perceptions of veterans in this study that it is the need to find alternative employment within a civilian context that they consider to be the adversity that defines resilience and that civilian life has the potential to involve multiple sources of stress that can "get too much for people". What is of interest in this study is that veterans identified managing transition stressors, such

as securing employment, as more challenging due to the need to consider the needs of their loved ones. This highlights a tension for these veterans in how they define resilience, on the one hand as securing gainful employment within a civilian context, i.e., adapting to a particular adversity, however on the other hand *how* they adapt as needing to not reflect "bad ways of coping" to their children. This consideration of family functioning in resilient adaption was mentioned by the majority of this sample (twelve veterans) as being a defining feature of resilience. One veteran noted that he had decided not to continue in a civilian job role that was "causing more stress to…family". For these veterans it appeared that reaching a 'resilient outcome' involved not only their individual adaptation but also how their families were able to function or 'be resilient' with them as a unit.

(ii) Resilience takes time; a slow process that involves learning

Numerous studies with military veterans have defined resilience as linked to individual personality traits, for example as perceived control, optimism and self-esteem (Schok, Kleber & Lensvelt- Mulders, 2010) or as positive emotions and cognitive flexibility (Pietrzak et al., 2009). Our study highlights that individual traits or skills may play a role in resilience, particularly cognitive appraisal of adversity as something manageable, a "part of life" and "expected" as important in being able to adapt. However, for these veterans, individual traits were rarely the defining feature of resilience. Those that commented on resilience as being the ability to adapt to adversity, noted that the utilisation of personality traits in successful adaption required an understanding and appreciation of the context and nature of any adversity i.e., the ability to know *how* a trait or skill could be used under particular situational demands specific to that adversity in order to confer resilience. Of note from our findings are participants' comments around *changing* personal qualities in order to react and manage resiliently in a civilian context. For example, tempering the use of "banter" was highlighted as necessary within a civilian context, however, it was commented on and

displayed by all participants when discussing how they faced the "unique" demands of military life. Banter was mentioned as "not meaning anything to civilians", and was one example provided of the personality traits or qualities that veterans were aware of trying to change in order to be resilient in ways that accounted for the cultural norms of civilian life.

The arbitrary nature of protective factors across context has been noted by Ungar (e.g., 2004; 2011; 2018) who advocates for consideration of the role of wider social-ecological resources, such as social support, interacting with individual strengths or promotive factors, such as seeing the funning side of adversity, to result in resilience in the military context but perhaps not in a civilian one (e.g., Ungar 2018). As elucidated in the metatheory of resilience that seeks to explain how individuals maintain their 'homeostatic balance' in the face of internal and external disruptions, how people manage is influenced by previous experiences of both successful and unsuccessful attempts at adaptation (Richardson, 2002). Novel experiences would therefore be more difficult to adapt to, and furthermore the individual may lack the protective factors necessary for adaptation. What our findings suggest is that learning new skills or, 'personal protective factors', as defined by Richardson (2002) depend on an appreciation of *what* would be a culturally normative protective factor and *how* to apply it effectively. These veterans experienced the opportunity to focus on themselves once they completed military service, however, developing the ability to be self-reflective required an understanding that this was a protective factor in the context of 'civilian adversities', and that it was useful and necessary in relating and communications effectively with their families. Furthermore adequate material resources were necessary in providing environments that were conducive to allow for sufficient headspace to learn, develop and practice such skills.

These veterans' accounts identify resilience as a multidimensional construct that involves functional adaptation, most notably the need to find 'civilian employment' in a way that promotes the systemic functioning of the veteran as part of their family unit. This supports

the need to account for outcomes that can meaningfully signify resilience to participants, and caution that researcher- defined outcomes such as symptom reduction may run the risk of overestimating the prevalence of psychopathology due to a lack of cultural sensitivity (Batey, 1999; Cross, 1998).

Further aims of the present research were to shed light on how veterans understood resilience to develop and what affect being a military veteran had on this process. Our study shows that adapting to adversity was a process that was constructed over time. All veterans stated that resilience required learning and increased with age and practice. One participant noted that when difficult experiences continue to happen you learn from them and start to "take control". These experiences of developing and demonstrating resilience appear to echo various authors in the field of resilience who have cautioned against conceptualisation of resilience as a personality trait (e.g., Ungar, 2004; 2011, Ahern 2006, Windle 2011). This may be due to an overestimation of personality as the causal route to a resilient outcome, where it is more accurate to think of personality as one of many potential contributors to resilient outcomes (Bonanno and Mancini, 2008). As observed by Mischel (1969) personality rarely explains > 10% of the variance in individual's behaviour across situations. The situational nature of resilience is alluded to in our findings with more severe adversities identified as requiring more time for resilience to manifest. Participants highlighted that this was due to the need to adapt existing approaches and skills in order to 'match' skills with the adversity in question, and that this was necessary even when self-esteem might be low making you "want to crawl away into a corner", highlighting how there may be a limit to the role of personality traits such as self-esteem in being resilient in the face of more challenging circumstances. Veterans once again unilaterally commented that transition from military to civilian life was the adversity that required the most time, adaptation, and practice of both current and newly developed skills to be able to manage. This appears to support the

supposition that chronic adversity may be more difficult to manage by definition due to high and continued exposure to risk factors (Fergus & Zimmerman, 2005) as was characteristic of the transition period for the veterans in this study.

(iii) Recognising and managing emotional responses

Our findings further indicated that developing resilience involved learning to identify, manage and regulate emotional responses (Efklides, 2008; Jäger & Bartsch, 2006). A number of studies have proposed a role for emotional stability and the ability to experience positive emotions in resilience after exposure to PTEs in both civilian and military populations (e.g., Rice and Lui, 2016; Elliot et al, 2017). What is important to note from our findings is that participants elucidated a process of thinking about their emotional responses and of learning other ways to respond by regulating or controlling their emotions. This may posit an important role of meta-emotional appraisal (Jäger & Bartsch, 2006) in the process of resilience for these military veterans. Jäger and Bartsch (2006) define meta-emotions as having emotions about one's own emotions and appraisal as both the inner experience and external expression of emotions according to culturally defined 'rules' of display (Hochschild, 2012). This can be noted in participants' own comments about learning to "stop and think about your emotions" in order to behave in ways they defined as being 'more resilient'. Matt noted that developing the ability "to be able to just think about things a bit more before I start just ranting and raving" had allowed him to be able to feel confident in communicating with his wife. Nicola observed what helped to manage was being able to exercise control in emotional life by thinking about emotions, identifying "automatic responses" and then being able to adapt these to respond differently at times. Furthermore, it appeared that meta-emotions played a role in learning to be resilient when adverse experiences provoked strong emotional responses. One example is the strong emotions that all veterans noted could accompany recall of military experiences at a later date. It appears

from our findings that veterans showed an awareness of the difference between coping with these experiences and being resilient in the wake of them. What veterans identified as fundamental in being able to regulate their emotions in such cases, and thereby show resilience, was being able to reflect and note their own emotional responses to their distress and moderate these by “sitting with it" and increasing “self-awareness” of their emotional responses.. In addition, where talking to others was identified as an important part of the process of emotional regulation, and being able to feel experiences were “put to bed”, participants commented they valued doing so with others who has shared similar experiences, i.e. servicepeople.

All twelve veterans who commented on resilience involving a process of emotional regulation, appeared to identify a contradictory need to supress their emotional responses in order to continue to carry out their military roles under combat conditions, thereby highlighting the role of differing culturally defined ‘rules’ of emotional experience and experience within the military. “Repressive copers”, those who avoid unpleasant emotional experiences have been found to cope well with PTEs (e.g., Coifman, Bonanno, Ray & Cross, 2007), however as our findings demonstrate there may be a cost to this whereby a lack of opportunity to regulate these emotional experiences may contribute to the development of mental health difficulties for some.

All veterans commented on how long it had taken to develop their emotional awareness and management skills in order to increase their resilience. This may partly explain why current routine treatments for PTSD, such as cognitive exposure therapy and prolonged exposure have been found to have limited success with symptom reduction and high drop-out rates (Steenkamp, Litz, Hoge & Marmar, 2015), indicating an urgent need for new types of supports and interventions (Steenkamp, 2016a, 2016b) that are perhaps better at assessing for and targeting considerations raised by these veterans. These include feeling “judged” by

civilians, experiences of interpersonal disagreements, and a lack of opportunity to "sit with" their emotional responses within the context of their military roles and responsibilities.

(iv) Resilience depends on your social group; in finding material resources

Our study calls attention to these veterans' experiences of resilience being contingent upon the social group that they belonged to. Various authors in the field of resilience have alluded to what Ungar (e.g., 2004, 2011c, 2013) calls the social-ecological nature of resilience. This perspective appears to fit what these veterans highlight in terms of their social group being a definitive part of the environment, or social ecology, from which they obtained or negotiated for the resources required to be resilient. Adequate financial resources and housing were identified by all participants as necessary resources in facilitating the development of their resilience. Fifteen out of the sixteen veterans interviewed identified that their 'basic needs' were provided for completely by the military structure. "Accommodation was paid for, all my food was paid for" as noted by Darren, and all health needs were catered for. As such military group membership included access to adequate financial resources and housing, which participants noted was not the same in the civilian context. Securing employment, housing, "finding a dentist…doing your doctors" within a civilian context implicitly placed a need on individuals to navigate several systems and to negotiate for resources, such as with the "banks" or "mortgage people" that would have been provided for without any need for negotiation as part of the structure of military life. It would appear that the capacity of a population to deal resiliently with adversity is often related to the capacity and willingness of their societies to provide resources (Ungar, 2013) with vulnerabilities increased at times where there are periods of high unemployment and institutional practices that reduce resources like social welfare, childcare and education (Willms, 2002). Such findings may be tentatively considered in relation to our findings in that moving from a military to civilian population involves less immediate access to adequate resources, however, perhaps by

definition rather than 'institutional practices' as leaving the military necessitates both a loss of employment and other military-provided resources such as "the cookhouse", childcare, community activities and allocated housing. This may explain why all veterans identified a decline in their resilience and notably their mental wellbeing, even when family and friends were available to provide social support and material help over the transition period.

Our findings also raise importantly that where veterans were not able to turn to friends and family for material support in particular it appeared that the loss of military structural support, identity and occupation led to the potential risks of turning to "drink and drugs" to manage. Once again it appears that these veterans' accounts chime with social-ecological theories of resilience, in that capacities of *both* individuals and their environments interact to produce adaptative responses (resilience) or 'pathological' adaptation (e.g., Ungar 2013). Our findings indicate that environmental resources may play a greater role in facilitating resilience, and that this may be even more significant where people experience the compounding effects of exposure to (military and/or civilian) trauma and financial and social marginalisation (e.g., King et al 2006, Hourani et al 2012, Ungar & Leibenberg 2011; Ungar et al., 2007).

(v) Group membership; support and belonging

Our findings further indicate that the loss of military group membership led to "self-doubt", "loneliness" and struggles with "lost friendships", with resilience to such losses only possible with time and bolstered by the presence of pre and post-military social contexts characterised by supportive family and friendship groups. Social support has consistently been found to be a fundamental aspect of resilience, across varying samples, with differing experiences of adversity and when differing outcomes are identified to denote resilience. Ahern (2006), for example, illustrated the role of supportive peer relationships in adolescents achieving well at

school despite various adverse circumstances including poverty and parental mental health difficulties. King and colleagues (1998) found that both functional and structural social support (complexity/ size and perceived emotional and instrumental support respectively) were associated with lower levels of PTSD in high and low combat- exposed veterans of the Vietnam War. What is important to consider from our findings is that even when supportive civilian relationships were in place, all veterans identified a prolonged period of adjustment when first transitioning back into civilian life, where they found it difficult to relate to the majority of civilians.

Moreover our findings indicate that veterans were required to adjust their self-identified group membership away from a military one (Tajifel, 1978; Turner, Brown & Tajifel , 1979), and once again this was made easier by other supportive and salient group memberships which Nicola commented as being part of "your own kind of tribe". All commented that adjusting to being a civilian was made challenging by the differing norms of military and civilian groups, most notably 'military collectivism' and interpersonal interdependence (Triandis, 1988), compared with more individualistic civilian interpersonal norms such as being able to "pick and choose who you want to be friends with…where you want to live…what job you want to do". These veterans highlighted that adapting to these differing norms was part of a process of developing 'individual resilience' including reflective capabilities, emotional awareness and "dealing with relationships on your own". This is particularly important to consider as these findings indicate that all veterans identified the support of others during times of adversity as a vital precursor to their individual resilience, with the potential for the process of resilience to 'reverse' in response to how others viewed them. If veterans feel, as the majority of participants in this study did upon leaving military service, that civilians regarded them with perspectives such as "you're not going to fit into the office", this is likely to make it more difficult for them to access the social support they

identify as vital to resilience once they have completed their military service. Furthermore there is tentative evidence to suggest that the strength of these military bonds may lead to a type of vicarious alienation when comrades are not able to access help and support from civilian institutions, which may contribute to them 'sticking more strongly with each other'.

Group membership has been shown to play an important role in how individuals develop their self-concept (Onorato &Turner et al., 2004), Turner, 1987), with how one locates oneself within a social group as defined against other social groups playing an important role in this (e.g., Hornsey & Hogg, 2000). Given the strength of the veteran bond in promoting a group identity that may run the risk of alienation from and towards the 'civilian majority', the need to promote contact between military veterans and civilians appears vital. This is not only to perhaps reduce these veterans feelings of alienation as also noted in the literature relating to intergroup biases (e.g., Allport, Clark & Pettigrew,1954; Pettigrew 2016) but as a potential avenue towards bolstering the resilience of both veteran and civilian groups and individual, as observed in 'resilient communities' who are able to adapt well upon experiencing separation from their culture of origin (e.g., Bhatia, 2007) or by working together in the aftermath of natural disasters (Links et al., 2018).

(v) The role of the military; training

Our findings show that resilience to withstand the stresses of combat was necessary and expected within the military in order to fulfil occupational duties and manage the day to day challenges of military life. Litz (2014) notes that service members are both screened and self- selected to be trainable in the face of life-threatening experiences and this may allow them to show high levels of resilience in the context of traumatic stress. Our findings lend support to this observation with all veterans commenting on skills such as "discipline", "willpower", and being "taught to just get on with it" while on deployment. All spoke of

such skills as aspects of 'personal resilience' vital to manage any challenge, however six veterans raised the potential risks of assuming an ability to be resilient at all times in the face of life's challenges. Stuart noted that a "macho culture" existed and was perpetuated through military training that resulted in a lack of support for those who may have struggled to maintain their resilience during occupational service. Such observations are supported by various studies, and these participants own observations, that identify military training and experiences as involving an ability to suppress emotional distress, which may later have an impact on mental health and wellbeing (e.g., Green et al, 2010; Elder & Clipp, 1989). What is important to note from our findings is that the presence of emotional distress can co-occur with the maintenance of competence, i.e., resilience, indeed as also elucidated in the work of Green and colleagues (2010) and Elder and Clipp (1989). However this appears not to be the case for all participants all of the time, across all life domains. This suggests pluralistic expressions of resilience may perhaps be possible for the same people, depending on their situations, and the opportunities available to them across the contexts in which they operate to access the resources that allow for culturally meaningful displays of resilience. (e.g., Harvey, 1996; Harvey et al., 2003; Ungar et al.,2018).

Fourteen veterans noted that they had felt able to manage their military adversities but were less prepared for 'civilian stresses' that may have happened concurrently, such as the ending of relationships by virtue of not having the opportunity within military life to build such skills. High levels of unit cohesion in the military have been shown to relate positively to self- identity (Turner, 1987), mental health outcomes, and in moderating the negative impact of accumulated traumatic events (Martin et al., 2000). Additionally studies have found that the squad or platoon can act as a social resource that helps to buffer stress that new recruits understandably experience during basic training (Williams et al., 2016). Taken together such findings support the accounts of these veterans that they were, in part at least, able to manage

military stressors due to their abilities to trust other members of their unit to "cover your arse" and to work together as a team (Siebold, 2007). Such working together as a team appears to require differing skills to those that may be required in what can be seen as the opposite process of working to separate from a team or family, the reasons for which may in part be due to time spent away in military roles, as alluded to by these participants. This may tentatively suggest that resilience requires balancing across differing roles and responsibilities and there may be 'cost' in one area when one is focused on being resilient in another.

Half of these veterans spoke of difficulties connecting to their loved ones, the majority (thirteen) mentioned that friendships were not the same for them in civilian life due to differing values. Furthermore, all sixteen commented on feeling set apart, different and "not normal" within a civilian context by virtue of the expectations placed on them in their military roles. One example provided was being able to wield a weapon with the skills to use it to shoot another human being and the foreknowledge that you may need to. Our findings provide some tentative evidence that becoming a soldier involves a separation both physically and emotionally from family members in order to become a soldier. This separation may indeed be necessary to allow for strong bonds of trust to develop between military units, and there is indeed evidence to suggest that this 'military bonding' may be a protective factor against the development of PTSD (e.g., Pivar & Field, 2004, Green et al 2010, Ahern et al., 2015). As our findings indicate this is also an important aspect of being resilient in a military context. It is important to highlight, however, that our findings also indicate that the actual or perceived loss or weakening of these bonds from the point of transition to civilian life onwards can lead to increased distress over the lifespan (Mobbs & Bonanno, 2018).

Our findings additionally raise some inherent contradictions in how veterans define resilience, what resources are required in facilitating it, and the skills and capabilities of individuals that appear to interact with relevant (environmental) resources to allow for the

process to develop. On the one hand participants clearly rely on the support of their comrades in fostering their individual resilience, on the other hand they see themselves as different from civilians and in some cases cite that their resilience can be negatively affected by the 'civilian disagreements' that may in part occur due to this military-civilian divide (Mobbs & Bonnano, 2018). It appears, that these veterans have an awareness of the importance of social bonds in their abilities to be 'resilient individuals', but additionally to be a competent part of 'resilient networks'. It is important to note that for these veterans families, loved ones, friends and workplace colleagues appear collective networks of concern and importance, and all spoke of persevering in learning how to be resilient in ways that were meaningful in these each of these contexts and promoted collective thriving.

Furthermore, the idea that they should be "able to manage" and to cope with life's challenges appears to be a key message in military training which seems to reinforce a contradiction in the understanding of resilience for these veterans as something that they perhaps *should* be able to achieve by virtue of their military experiences. Without the support of others this type of task- focused 'military resilience' at least appears difficult to maintain, and that leaving the military further complicates the ability to make use of these military bonds and access other vital resources required in the process of resilient adaption to adversities that exist outside the military context.

Military experiences and identity

Finally our findings draw attention to a further complication in the process of developing resilience for military veterans. Becoming a member of the Forces involves instruction and immersion both in practical skills training, but also a process of thorough inculcation in military ethics, standards and values (Lieberman et al. 2014; McGurk et al., 2006). This notion was highlighted by participants who identified the military as replacing existing family

structures, which makes sense when one considers the nature of close living and working conditions while on deployment (Green et al., 2010). This appears to create a tension when military service ends, for those veterans who do not have families who are able to provide support and those who are medically discharged in particular perhaps. One participant provided an example of being medically discharged and requiring legal support to claim his military pension and half of participants noted that the military organisation had not provided them with support as expected once they left military service. Resilience was negatively impacted for all these veterans and it may be that experiences that change how the military is remembered and viewed affect the ability for 'resilient reintegration' to civilian life. If, as these participants note, their military identities provide them not only with bonds of friendship but memories of times where they were able to maintain their resilience under conditions of extreme hardship, if their perceptions of the military organisation changes, how this might impact their beliefs about themselves and their abilities to be resilient is an area that would be important for future investigation.

4.03 Methodological considerations

(i) Co-production. A key strength of this research is co-production with veterans by experience in conceptualisation, design, and in data collection and analysis. I will consider this process in relation to methodological rigour with personal reflections on how co-production affected and developed how I approached this study as an individual and as part of a team of co-researchers. Finally I will present some brief recommendations that may be useful to consider in co-producing research with military veterans, including reflections from the veteran co-researcher who contributed throughout.

Co-production proved to be a more democratic process than I had expected or considered possible when starting to think about how veterans might understand resilience. The third

sector organisation stayed engaged and involved with this study throughout various unforeseeable challenges. This is a testament perhaps to a dedication to contribute meaningfully to their communities, improve the lives of each other and to promote effective teamworking where there is a common goal and purpose, indeed as our results indicate.

Early input was provided into the researcher's study proposal by two mental health professionals providing input into the organisation and two veteran staff members. The two veteran co-researchers and the researcher were involved in initial meetings to develop study materials and discuss plans for data analysis. One veteran staff member provided input into recruitment of participants, being in attendance when the researcher conducted interviews, and into various stages of the analysis.

An important aspect of the co-production process involved some of the more informal visits by the researcher to the third sector organisation at the recommendation of the two veteran staff members. At such visits the researcher was able to discuss the topic of interest with those who 'dropped in' to the organisation for informal peer support, and provide some input by helping make tea and coffee. I think I underestimated the importance of my 'showing my face' at the organisation, of talking to veterans as I might anyone else while working to complete tasks together, and to sit and have a cup of coffee as invited to by them. In this way I showed, I think, that I was willing to listen and to be led, and often corrected, by veterans in developing my thoughts and ideas around the research topic. One early bias in my thinking I can remember is believing that resilience for veterans would reflect unique shows of physical strength and prowess that allowed them to continue with their operational duties under conditions of extreme adversity. I thought this may at the same time promote a vulnerability for developing PTSD, or of decreasing resilience, once veterans left military service due to unresolved memories and emotions relating to their 'military trauma' that veterans themselves may largely be unaware of. Through being around veterans as they spoke to each

other and to me, I very quickly realised how limited and perhaps limiting this assumption may be. As noted by Mobbs and Bonanno (2018) the media has depicted veterans of recent wars as warriors who have broken down or dangerous and armed. While I was aware of more 'personal beliefs' around what I thought resilience was, I was not aware of how I may have been influenced by the messages of the media in constructing my views on military veterans and 'veteran resilience'. This is just one example of many, where I revised my thoughts and opinions via the process of co-production. Without these experiences I think my attempts at interviewing participants would have generated different responses and I may have failed to follow up on important areas relating to how veterans understood resilience, for example recognising and understanding their emotional responses. This highlights how co-production facilitated attention to methodological rigour in ways that I had not predicted and led to continual improvements in how the study was designed and how data collection and analysis was approached and conducted. Thus co-production played a role in defining how the quality of this study may be judged against the relevant assessment criteria of commitment, rigour, transparency and coherence and finally impact and importance (Yardley, 2000).

The sensitivity to context was enhanced by being able to bring a veteran by experience perspective to bear on researcher-generated theories and attempts at understanding resilience in military veterans (e.g., King et al., 1998; 2006; Youssef et al, 2013; Litz, 2014). As the example above illuminates the researcher was able to reflect on previously unacknowledged biases, one of which was a perhaps implicit assumption that resilience for military veterans would be defined in relation to experiences of 'war trauma' and PTSD. Indeed much of the research that conceptualises resilience in military veterans does so as the resources that negate the development of PTSD after exposure to wartime experiences (e.g., DeViva et al., 2016; Greenberg et al., 2019). Our co-produced findings highlight that this may be a limited

approach to understanding resilience in military veterans and other indicators of resilience may be important to consider in research with military populations. This may include how veterans navigate and adapt to the adversities of transition and what resources they identify as key in this process, such as adapting personal qualities to civilian norms while being able to maintain ties to their veteran comrades.

Commitment to the topic of interest appears to be strengthened by the co-produced approach. The involvement of veterans by experience increased my curiosity in the topic and I was required to explore areas of research that I had not 'predicted' as being relevant within a military population. One example is how group membership appeared to define *what* resources might be most meaningful in being resilient and how opportunities to access these resources may be different depending on 'actual' and 'perceived' group membership highlighting considerable differences in how veterans were expected and able to show resilience as members as the military and as civilians.

Rigour was also supplemented through the process of co-production in that by involving the co-production organisation, most notably one veteran member, in recruiting for the study the diversity of the sample was perhaps increased. The study information was able to be 'targeted' to veterans who showed an interest after hearing the researcher talk at the organisation and were able to talk further to veteran co-researchers and suggest other potentially interested participants. This 'network' of veterans provided perhaps a more diverse sample than if the researcher was solely responsible for recruitment. Indeed members of the Army, Navy and Airforce were represented in the sample. Women were recruited by the veteran co-researcher and reflected a fifth of this sample, while this is a small number it is worth mentioning as it appears that recruitment of women in veteran research may be difficult (e.g., Green et al., 2010).

Transparency and coherence were considered and accounted for by the explicit consideration of how a critical realist ontology and contextualist epistemology were able to provide a cogent basis for a co-produced methodology. Furthermore, a method of analysis was chosen that was flexible (Braun & Clarke (2006; 2013), and therefore able to account for co-production of data collection and analysis. Transparency in this process has been demonstrated through clear delineation of this co-produced analysis within the Methods and Results Chapters. Braun and Clarke (2019b, 2019c, 2020) continued to develop and clarify their approach to TA over the course of this study and coined the term *reflexive thematic analysis* (Braun & Clarke, 2021) which reflects the approach taken to TA in the present research. This approach encourages theoretically sensitive engagement (Yardley, 2015) and reflexive engagement, evidenced in this study through ontological and epistemological positions that allow for flexibility in the constructions of knowledge(s) necessary to promote co-production of materials, data collection and analysis. Such flexibility would appear capable of promoting an approach that allowed a pluralism of thoughts and opinions within all of these stages and for compromises that were required. 'Additions' to the topic guide were made on the basis of feedback from two members of the co-production panel. One was the need to include a dictionary definition of resilience, should participants not be familiar with the word resilience. My view initially was that this might limit the thoughts veterans were able to provide. However, with flexible prompts added according to how the co-researchers thought about resilience, for example how others might impact your resilience, participants could be encouraged to further develop their ideas allowing for a broader conceptualisation of resilience.

The quality of the analysis was markedly more robust through the application of co-production. I was able to understand from the co-researcher's coding areas that were relevant to a veteran understanding of resilience and hold in mind any potential areas of difference or

disagreement. In fact when reviewing the themes I had generated with my veteran co-researcher it was noted that there was little disagreement or divergence when the process of theme construction was discussed and verified through checking against coded sections of interviews together. It was noted that I had been able to highlight areas of concern to veterans, such as a perhaps differing 'threshold' to stress in comparison with civilians with sensitive consideration of how this may lead to causing unintended offence .

In addition a member of the co-production panel was able to read drafts of the researchers chapters (selected for relevance and brevity by the researcher) as part of the co-production process. I found this initially quite difficult, to share what felt to me as my far from adequate words. I think, however the breadth of my knowledge and my critical appraisal of literature relating to resilience in military veterans was vastly improved by a veteran perspective on my interpretations. I was also aware of 'making something academic' where the subject matter may very well have been both personal and emotive for the co-researcher. Through discussion of relevant literature, draft chapters, reports of our collaborative analysis and thinking together about areas that may be important to explore in future research with military veterans, the relevance of this research to veterans has also been considered and enhanced via co-production. For example, one suggestion made for future research with military veterans was around how veterans were able to develop their emotional awareness and skills. In particular what were veteran views and experiences of working to do this within mental health services, and what if any were suggestions for making such services more accessible.

Coproduction can be considered as making the most notable contribution to quality criteria of impact and importance. Findings, as highlighted above, were considered in relation to their relevance to military veterans in terms of how analysis was conducted, how findings were

constructed and the appraisal of these findings in relation to existing literature examining resilience in military populations.

Disseminating these findings to the veteran organisation is currently under consideration and paused due to the researcher's understanding that the organisation is not currently operational, but may be in coming months. The researcher and veteran co-researcher are due to meet again after thesis submission, with a view to meet with the other veteran members of the co-production panel for further discussion and consideration. A preliminary report of the findings is in the process of being drafted by the researcher in a 'simplified' and shortened format.

(ii) Recommendations for co-production with veterans, with reflections from veteran co-researcher

- Planning for co-production in the research time-line. This is perhaps not something I had adequate understanding nor practice with prior to conducting this research. Having sufficient time to think through ideas and thoughts with co-researchers, to make time to discuss literature and to consider the ethical implications of the process of co-production was vital to the planning, execution and write-up of this study.
- Taking the time to develop relationships with relevant stakeholders and being transparent about your motivation for conducting the project.
- Being realistic and flexible in how much to expect from co-researchers.
- Responding to feedback on ideas and actioning changes and amendments to those so that that project was co-produced *in practice*
- Sharing of knowledge and skills in both directions. Panel members have provided their expertise throughout. My hope is sharing the Braun and Clarke (2006:2013) method for (reflexive) thematic analysis, and meeting to demonstrate and discuss this

with a veteran co-researcher I was able to promote a sharing of the skills and knowledge that I have developed through my study with my veteran co-research team. Further sharing of knowledge and skills are in plans for shared dissemination including co-authorship of any publications that arise from this study.

Comments and reflections from veteran co-researcher

Before this research, I had little experience with co-production. It has been illuminating. Although from a different demographic as the first researcher, I feel we both approached the work with open minds.

There was a willingness to challenge (without offence being taken), with the opportunity to explore the data fully. I would describe this co-production as synergistic.

There has always been a pragmatic approach to this work. The desire to work together in the future to implement processes that meet the needs of military veterans more closely is, for me, a testament to what effective co-production can achieve.

Included with consent and after discussion with veteran co-researcher

(iii) Limitations. A limitation of the present research, however could be in in the lack of ethnic diversity of the sample, and it would seem important to seek the views of those who may have differing experiences of the military structure, which may also include a sample with greater representation of women. There is evidence to indicate that those who do not perhaps fit easily into the military culture, including women and ethnic minorities, may be less able to access and make use of 'military bonds' (e.g., Green et al., 2010, Demers, 2011). This is of particular importance considering how relevant such bonds were to these

participants' abilities to be resilient. The 16 participants cannot represent the views of all ex-members of the Forces. Indeed is of note that 13 participants had some affiliation with the third-sector collaborator of this research, suggesting that these participants were willing to some extent to accept or ask for help. However this organisation being peer-led may perhaps promote veterans ability to ask for help but it may still be worth considering that the views of veterans not in contact with peer-led organisations may be different. Furthermore it is not possible to untangle how different factors contribute to resilience and indeed it may be that there are other relevant process or resources that participants were not asked about and did not mention. This may however be a useful area for future investigation. All the interviews were conducted by the researcher, a female civilian mental health professional undergoing a professional training in clinical psychology. Participants may have responded differently to veteran co-researchers, and if the interviewer was male (McKeganey & Bloor, 1991).

4.04 Future research

The current study has been successful in the aims of exploring what military veterans understand resilience to mean, how it develops and how being a military veteran impacts on this process of development. Our findings highlight the importance of social and ecological resources (e.g., Ungar 2004) in promoting veterans' abilities to be resilient, most notably access to employment, adequate housing and 'meaningful social support'. Veterans appear, however, to raise some differences in terms of how such resources are defined within military and civilian contexts. An important avenue for future research with military veterans would be in-depth qualitative examination of veterans use of 'military and friendships' to foster their resilience, and how differences in conceptualisations of 'social support' across subcultures may affect veterans abilities to be develop and promote their resilience. Furthermore the 'cultural differences' between military and civilian life and how these affect

opportunities and abilities to negotiate for the resources veterans identify as part of their resilience would be an important area for future research in and of itself.

The expression of resilience within military and civilian domains appears somewhat different, with our findings indicating a role of differing situational adversities and constraints (e.g., Mobbs & Bonanno 2018) and of how differing cultural norms affect *what is* deemed resilient (e.g., Koss & Harvey, 1991; Harvey, 1996; Harvey et al, 2003). Further exploration of how situational adversities and cultural norms interact to promote resilience in military veterans, therefore, appears an important avenue for in-depth qualitative research.

These veterans highlight what is referred to in the psychological resilience literature as a 'steeling effect' (e.g., Schoon 2006, Bonanno & Mancini, 2008) in terms of their abilities to manage PTEs and therefore to be resilient within a military context. Future research with military veterans would benefit from seeking to account for areas of resilience that might be 'culture specific' and those that may be more general and perhaps what makes the difference. Our findings, for example, seem to indicate that the nature of the adversity and repeated exposure allows individuals to develop resilient skills and then practice them across repeated exposures under combat conditions. Such areas would be important to examine empirically as it seems important to understand how adversities affect the development of resilience and to consider how scales that measure resilience within veteran populations 'fit' with conceptualisations that may shift according to the culture a veteran might be situated in. The development of a culturally sensitive measure of resilience (eg., Clauss-Ehlers, 2008) appears an important area of consideration for future quantitative enquiry of resilience in military veterans.

Finally, how resilience is impacted at times of change or transition appears an important consideration for future research seeking to understand resilience in military veterans. As

noted, our findings shed light on how transitioning from military life *changes* what veterans understand resilience to mean, what they need to do in order to become resilient and what 'resilient actions' are required??. It would appear to make sense that times of flux may impact resilience, particularly if group or unit membership affect how veterans define themselves (e.g., Tajifel, 1978; Turner, Brown & Tajifel , 1979; Mobbs & Bonanno, 2018). Such research may usefully elucidate how other transitions, for example aging or parenting, impact on how veterans understand and promote their resilience.

4.05 Clinical implications

The utilisation of a co-produced methodology has been of critical importance in this study by framing and asking questions in a way that was able to generate knowledge that can be useful to veterans in their everyday lives (Reason & Bradbury, 2001).

Firstly, it would appear important to consider that veterans identify themselves to be resilient, and indeed out findings present multiple examples of resilience in the face of traumatic events and traumatic losses. However, as these veterans themselves identify, they lack resilience in the face of other 'civilian adversities' most notably sustainable routes into employment and relational difficulties associated with reintegration to civilian life including culturally normative differences in values, beliefs and 'appropriate behaviours'. Our findings suggest an urgent need to broaden the scope of psychological interventions with traumatised veterans, such that the distinction between 'military PTSD-related symptoms' and transition stressors is factored into interventions that target the psychological distress expressed by many veterans on their return to civilian life (Mobbs & Bonanno, 2018). The almost exclusive prioritisation of prolonged exposure and cognitive processing therapies for PTSD (Friedman, 2006; Yehuda & Hoge 2016a, 2016b) is troubling when low-take up and high drop-out rates are considered alongside the fact that many veterans who do participate

continue to suffer elevated symptom levels (Steenkamp, Litz, Hoge & Marmar, 2015). Tentative reappraisal in the light of our findings suggests that such psychological interventions may be attempting to target correlates of psychopathology, when in fact veterans are resilient to 'military trauma' and their distress and deleterious outcomes may instead be related to other factors such as transition stress. There appears an urgent need for such sources of stress to be factored into psychological assessment and for theory and research to prioritise the examination of transition risk and resilience factors. This was allow for the development of a more suitable repertoire of interventions that are capable of targeting heterogeneous difficulties including loneliness, isolation, and the difficulties understanding the 'cultural rules' of civilian life as raised by the veterans in our study. Furthermore, it appears important that welfare and social needs are explored with veterans as part of any package of support they receive including mental health support. Indeed it has been found that resilience after exposure to traumatic events is bolstered and improved by access to interpersonal and work resources (Bonanno, Galea Bucciarelli, & Vlahov, 2007), and for these military veterans occupational functionality and stable housing appears to promote, and sustain their resilience in both military and civilian contexts.

Our findings detail a nuanced and complex picture for the role of emotional awareness, regulation, and management in promoting resilience across differing experiences of adversity. It would appear, for example, that for these veterans resilient adaptation in the wake of traumatic events and losses involved an aspect of emotional suppression or minimisation (e.g., Coifman, Bonanno, Ray & Cross, 2007). In the context of 'civilian adversities', however, there appeared a need to notice and regulate emotional responses to be able to communicate better with family members at times of conflict or to temper reactions at times, for example when misunderstood by civilians in the workplace. Such findings when considered in the context of current psychological approaches to the treatment of PTSD,

present a tentative challenge to the almost exclusive focus on trauma re-processing as advocated by cognitive models of PTSD (e.g., Ehlers & Clarke, 2000; Shapiro, 2002). Such a focus on fear memories in psychological therapies that address PTSD appear limited in the context of military veterans for a number of reasons. Firstly there may be benefits in terms of resilience in avoiding re-visiting past traumatic events (e.g., Bonanno et al., 2004, Coifman, Bonanno, Ray & Cross, 2007), such as being able to maintain occupational functionality as raised by these veterans. Moreover such an intrapsychic focus may obfuscate relational emotional processes that may perhaps be implicated as causal factors in veterans distress, and therefore important routes to improved resilience when addressed through therapeutic intervention. Indeed, these veterans in general do not report high levels of distress resulting from their military experiences, supported by estimated prevalence rates of 4% for combat-related PTSD in UK Coalition Forces deployed in conflicts in Iraq and Afghanistan (Fear et al., 2010). They do, however, all report a decline in their mental health and high levels of distress when transitioning to civilian life. It would appear that transition stress may potentially lead to reactions that could be labelled 'traumatic stress' and that feelings of social isolation, fear of real or perceived discrimination and experiences of humiliation and shaming (Carter, 2007) in the civilian context represent concerns raised by these veterans in relation to their abilities to maintain their resilience and mental health. Such experiences are well documented in the literature on racial trauma (e.g., Carter, 2007; Comas-Díaz, Hall & Neville, 2019) as being implicated in stress-based reactions. It seems, imperative, therefore to explore how veterans can as individuals and as groups transform their environments with the support of culturally- relevant psychological treatments aimed at reliving stress pathologies (e.g., Helms et al., 2012). It would, therefore, appear particularly important that clinicians working with military veterans increase their cultural sensitivity and competence, in particular perhaps in appreciating the role of 'military collectivism'. Such collectivist

values and norms appear to promote resilience in a military context, however perhaps lead to distress, confusion, and isolation when veterans are back in civilian life with its more individualistic focus (Mobbs & Bonanno, 2018).

Finally, not all veterans may have access to families, loved ones or clear routes to access employment allowing for the continuation or development of supportive relationships in a civilian context, as our findings show. Developing ways to provide and promote access to environments that might encourage veterans to develop social bonds within civilian life appears both a key area for future research, and a necessary consideration in interventions supporting them in transitioning out of the military (e.g., Defence Holistic Transition Policy, Ministry of Defence, 2021).

> "*There is little about individuals that is so fixed that a facilitative environment cannot be a positive influence for change."*
>
> *(Michael Ungar, 2013 p.257)*

4.06 Conclusion: What do these findings add to our knowledge of resilience among veterans?

Our findings demonstrate that resilience as defined by military veterans occurs after exposure to adversities, according to the appraisal of, and constrained by the severity of these adversities, as a process that is both developed and constructed over time. In order for this process to develop, access to contextually-defined resources, such as adequate employment and the support of others, are required that create an environment in which an individual is able to maintain culturally appropriate signifiers of functionality, i.e., being resilient. Veterans are required to demonstrate aspects of resilience within their military occupational roles, and military training is focused on instilling such aspects of resilience, some of which may be useful in the context of 'civilian adversities'. Some skills, however, that are required

to manage adversity may not be focused on or developed in the military and it is these skills perhaps that are most important to build or consider when seeking to support military veterans through psychological interventions and perhaps too in transitioning to civilian life.

Psychological theory has tended to focus on the role of resilience as a protective factor against the development of PTSD after exposure to military combat (e.g., Hourani et al, 2012, Green, Calhoun, Dennis & Beckham, 2010). Our findings highlight that for these veterans resilience does indeed appear to follow from exposure to adversity, however, military trauma is not the adversity identified as definitive in the need for a flexible and adaptive resilience. It is hoped that our findings can add to a growing body of evidence that is seeking to address 'gaps' in how veterans mental health is conceptualised and indeed the strengths that may serve not only to be protective to their mental health, but may in part be gained via their military training and exposures to military adversity (e.g., Mobbs & Bonanno 2018, Green et al., 2010; Demers 2011). This, however is not to say that some veterans do not experience difficulties with their mental health that relate to military trauma and that may be conceptualised by services as PTSD as seen in our findings and in the observations of the preceding authors. The important point to note from our findings is that the *why*, *how*, and in *response to what events* military veterans appraise situations as adverse appears to link to whether they experience emotional distress as part of their reaction to the adversity, and whether they feel able to manage these emotional responses.

Our findings clearly draw attention to the importance of emotional awareness in developing resilience, and while this cannot be said to be a general aspect of resilience *per se* due to the specific nature of the sample, it appears an important aspect of resilience in managing both military and civilian adversities. As such this finding may add to the general body of research on resilience, by indicating that a process of emotional awareness and management may underlie an individual's ability to be resilient. Authors in the field of resilience have

noted the absence of focus on emotional regulation in theories that seek to explain resilience (e.g., Fletcher & Sakar, 2013) and commented that the presence of distress and maintenance of competence may represent one of the strongest forms of resilience (Windle, 2011).

Additionally our findings indicate that some aspects of resilience may be important regardless of differences in cultural norms, such as access to adequate financial security, however other aspects are defined by culturally normative values and behaviours such 'meaningful social support' (e.g., Feldman & Masalha, 2007) . Importantly meaningful friendships from a military perspective include being to rely on friends at times of adversity who will do things for others "without any thought of personal gain". This is perhaps different to how friendships are defined in civilian life. Whether such differences in culturally defined (social) resources plays a role in whether individuals are able to utilise them in being resilient would be an important avenue for future research. The fact that all sixteen participants continued to maintain their military connections in some way at the time of this study may indicate the particular importance of 'military social support' in promoting resilience over time for military veterans.

Furthermore, the idea that veterans should be "able to manage" and to cope with life's challenges appears to be a key message in military training which reinforces a contradiction in the understanding of resilience for these veterans as something that they *should* be able to achieve by virtue of their military experiences. Without the support of others this type of task- focused 'military resilience' at least appears difficult to maintain, and that leaving the military further complicates the ability to make use of these military bonds and access other vital resources required in the process of resilient adaption to adversities that exist outside the military context. Finally our findings draw attention to the specific nature of the resilience that comes of being a member of the Forces. This resilience appears related to managing traumatic losses. Participants identified that their military training provided them with both

an awareness of potentially traumatic losses, and to some extent the resources to begin the process of resilient adaptation in the wake of these. This, most notably, was elucidated by these veterans as being the close emotional bonds between servicepeople that the majority later relied on to develop their skills of self-reflection and emotional awareness through longstanding personal friendships or peer-led groups through the third sector or online. Access to supportive relationships (e.g., King et al 1998; 2006, Pietrzak et al., 2010; Greenberg et al., 2019; Green et al 2010, Ahern et al., 2015) is identified as a fundamental resource for successful adaptation among populations exposed to higher levels of adversity. It appears, therefore, veterans without the support of families and loved ones, or those who feel disconnected from their loved ones may perhaps be most at risk in terms of their abilities to demonstrate or maintain their resilience within the civilian context.

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Appendices

Appendix A-Literature Review Method and Search Terms

Information sources. The search targeted peer-reviewed articles identified as including questionnaire measures of resilience within a military population, in the following electronic databases: Medline with full text, E-journals, PsychARTICLES, PsychINFO and CINHAL complete.

Search strategy. The table below shows the search strategy, conducted on the 17th of February 2017, not limited to a specific time. References were hand searched and the search was expanded to include these additional scales. Finally, a complementary search was conducted using Google Scholar with the terms 'veteran resilience inventory' and 'military resilience inventory' to identify further questionnaires.

Search Terms

Search	Search Terms	Results
1	Resilien*	30,650
2	Measure* OR scale* OR instrument OR questionnaire OR "psychometric properties"	9,744,591
3	Veteran*	201,155
4	#1 AND #2 AND #3	235

The updated search strategy used is shown in the table below. Database searches were again conducted on the 4th of April 2021 and were limited from 2017 to the present date to allow for identification of papers published since the initial search was run as above The original search 'veteran' was changed to 'military veteran' due to the primary researcher's experience of running the previous search where a large number of articles that did not involve military veterans were identified.

Updated search terms

Search	Search Terms	Results
1	Resilien*	683
2	Measure* OR scale* OR instrument OR questionnaire OR "psychometric properties"	8,745
3	Military veteran*	1,575
4	**#1 AND #2 AND #3**	**15**
Total from Table 1 and 2		**250**

Appendix B – Psychometric Quality assessment criteria

Psychometric property	Definition	Quality Criteria
Content validity	The extent to which the concept of interest is comprehensively represented by the questionnaire items	2- The measurement aim is clearly described with a working definition of concept. Target population involved in item development and selection (plus experts). 1- Only involvement of the target population (not experts) or method is unclear. 0- No target population involved, no information available.
Internal consistency	The extent to which the items in a questionnaire are correlated and form the same overall dimension/ dimensions	2- Exploratory/ confirmatory factor analyses performed (minimum 100 participants, to ensure stability of variance-covariance matrix) AND Cronbach's alpha(s) between 0.70 and 0.95 per dimension 1- Factor analyses not performed, method is unclear, Cronbach's not reported for each dimension. 0- Cronbach's alpha(s) <0.70 or >0.95, or no information available.
Criterion validity	The extent to which scores on a questionnaire relate to scores on a gold standard measure of the concept under investigation (in this case resilience).	2- Convincing rationale for a "gold" standard AND correlation of at least 0.70 1- lack of convincing rational for a gold standard, or unclear method 0- correlation of <0.70, or no information available.
Construct validity	The extent to which scores on a questionnaire are related to scores on other measures, consistent with theoretically driven hypothesis specifying the relationship between the concepts being measured.	2- Clear specification of hypotheses in advance AND 75% or more of the results consistent with the hypothesised relationship(s). 1- unclear method e.g. no specification of hypotheses 0- Less than 75% of results consistent with hypotheses, or no information available.

Psychometric property	Definition	Quality Criteria
Reproducibility - agreement	The extent to which scores are close together (in the unit of the questionnaire measure) when repeatedly administered in a stable population.	2- the smallest detectable change, SDC, (above measurement error) is less than the minimally important change, MIC, (clinically important change for each (sub)scale OR authors provide a convincing argument, based on their experience of scores, that agreement is acceptable. 1- Unclear method, or MIC is not defined, or no argument relating to acceptability is presented. 0- MIC is equal to, or smaller/greater than SDC, or no information available.
Reproducibility – reliability	The extent to which members of the stable population can be distinguished from one another (upon repeated administration) despite measurement error.	2- Intra class correlation coefficients (ICC) or weighted Kappa at least 0.70, with a sample size of at least 50 participants. 1- Unclear method, or inadequate sample size. 0- ICC/ weighted Kappa less than 0.70, or no information available.
Responsiveness	The extent to which a questionnaire can detect clinically meaningful change over time (in units of the questionnaire measure)	2- Clear specification of hypotheses relating to changes in scores of related measures or "known" groups over time. 1- Unclear method, or hypotheses not adequately supported (under 75%) 0- SDC is not clinically meaningful (larger than the MIC), or no information is available.
Floor and ceiling effects	The number of participants who received the lowest or highest possible score	2- less than 15% of participants attained the highest or lowest possible score. 1- Unclear method 0- more than 15% or participants attained the highest or lowest possible score, or no information available.

Psychometric property	Definition	Quality Criteria
Interpretability	Extent to which qualitative meaning can be ascribed to the quantitative scores attained	2- MIC has been defined and data has been presented for at least 4 relevant subgroups expected to attain differing scores (e.g. groups of different military rank or gender) 1- Unclear method, or MIC has not been defined or limited subgroup data has been presented. 0- no information available.

Appendix C-Participant Information Sheets

PARTICIPANT INFORMATION SHEETS

You have been invited to participate in a research study. It is important that you take some time to read through and understand the information that is provided on this sheet. Before you agree to participate, this study will be explained to you in detail and you will be given the opportunity to ask any questions. After you are satisfied that you understand this study, and wish to take part, you will be provided with a consent form to sign. A copy of this consent form will also be given to you to take home.

Study Title

Exploring resilience with military veterans: towards an understanding

Who is the researcher?

Ayesha Merali
Trainee Clinical Psychologist
University of Essex, Wivenhoe Park, Colchester CO4 3SQ
ameral@essex.ac.uk

What is the research about?

Psychological research with military veterans has tended to focus on the negative consequences of traumatic experiences on mental health (e.g., Hoge, Auchterlonie & Milliken, 2006). There has been some research where veterans have expressed positive outcomes from their wartime experiences, and many who feel distressed after traumatic experiences, have overcome their difficulties to live improved lives (e.g., Palmer, Murphy & Spencer-Harper, 2017). We are hoping to add to this body of work seeking to understand what it means for veterans to overcome their difficulties and be resilient in their lives. This is an exploratory study about what you think bouncing back after difficult experiences means and how it is relevant to you

in your life. We have developed this research in collaboration with the [redacted], a charity based in [redacted] that provides support for veterans.

What type of data are being collected?

We are collecting data using individual interviews. This means we are interested in your views and opinions on the topic of resilience (bouncing back after difficult experiences); there are no right or wrong answers to any of the questions that you are asked. Before the interview you will be invited to answer some *demographic questions*. This is for us to get a sense of who is taking part in the research.

Who is eligible to participate?

Veterans over the age of 18 who are no longer in active duty. It does not matter when you left active duty.

What happens on the day?

If you take part in this study, you will be asked to read and sign the consent form. You will also be asked to complete a short *demographic questionnaire* (you will not be asked to provide your name or any information that can identify you personally). You will be invited to participate in an interview, and be given the opportunity to ask any questions that you might have. The interview will take about an hour. As mentioned, we are interested in your opinions and views of resilience and how it might be relevant in your daily life. All interviews will be audio recorded as part of the research process.

What are the benefits of taking part?

You will get the opportunity to participate in research we hope is relevant to you. You will be able to express your opinions and views and contribute to knowledge on what bouncing back after difficult experiences (resilience) means to veterans. We hope that this will help us find ways to improve the treatment and support that is offered to veterans.

Will I be identifiable?

The interviews will be transcribed by the researcher (Ayesha Merali). The transcript will be anonymised so that any personally identifying information, like names and places will be changed or removed.

If it is felt that there is a significant risk of harm coming to you or to someone else during the interview, then there may be the need to breach confidentially and pass information to relevant organisations. We will seek consent before passing on any information. The only information that we might think about sharing outside of consensual agreement would be if there is felt to be a risk of serious harm to you or someone else e.g. death.

Are there any risks involved?

There are no particular significant risks involved in this project. The *general* 'risks' of participating in interviews on any topic are related to the potential to become upset by a particular question or topic (e.g., if a question reminds you of a distressing personal experience). If you feel distressed as a result of participating in the interview you can self-refer to [redacted] for support. If you prefer a service not related to this study, staff may be able to signpost you to other services, and you can access support from Wellbeing [redacted], if you live in these areas
via the website: https://www.wellbeingnands.co.uk/
or calling the self-referral line on: 0300 123 1503
You can also access support through your GP.

How do I withdraw from the research?

Participation in this research is voluntary. This means that although you have been invited to take part, you can decide not to participate. You can also change your mind and stop participating in the study at any time. There will be no negative consequences should you decide not to participate or change your mind. The support that you might receive from the [redacted] will not be effected in any way should you choose not to participate. If you do decide to stop participating in the study, please let your researcher know as soon as possible.

Please note that it will be impossible to withdraw from the research after certain points, for example, if papers have been published reporting the results of the study. Please, therefore contact the researcher (Ayesha Merali) *within a month* of participation if you wish to withdraw your data.

How will the data be used?

The data will be used in two ways:

- For research purposes: The transcripts will be anonymised (i.e., any information that can identify you will be removed). Once anonymised, the data will be analysed for our research, and anonymised extracts from this data may be quoted in any publications and conference presentations that arise.
- The demographic data for all participants will be reported in any publications or presentations arising from this research.
- audio files of your interview will be deleted after the data is transcribed and the transcribed data will be kept for a 5-year period, after which point it will be destroyed.

Attempts will be made to maintain confidentiality (within the constraints outlined above). Any personally identifiable details will be kept separately from the data. Your records will not be made publicly available and only the researcher (Ayesha Merali) and research supervisors will have access to the audio recordings. Only those involved in the research project will have access to the anonymised transcripts.

This research study, however, is subject to audit checks and audit bodies may be granted access to your research information to check on study procedures and data. However, these data will not be made public.

What we can offer for your participation

We are able to offer you a £10 high street voucher for taking part in this research

If you have any questions about this research please contact:

Ayesha Merali
ameral@essex.ac.uk

RESILIENCE

(bouncing-back after difficult experiences)

Veterans, over the age of 18, are invited to participate in a research project investigating resilience/ bouncing-back after difficult experiences

My name is Ayesha Merali, and I am a Trainee Clinical Psychologist from the University of Essex. I am conducting a research study in collaboration with a third-sector organisation *(anonymised for the purposes of the thesis)* that provides support to veterans. We are looking to examine the meaning of resilience to you.

By exploring your views about bouncing back after difficult experiences, this project hopes to better understand what it means to be resilient, and help us find ways to improve the treatment and support offered to veterans.

You will be invited to take part in an interview that will take up to one hour. You will be offered a £10 high street voucher as compensation for your time and a summary of research findings after the project is completed.

If you are no longer a member of the armed forces, were deployed for during active service, and are over the age of 18 you can participate in the study. We ask that you can speak fluent English and are happy to share your views about resilience.

If you are interested in participating or would like more information please contact me via e-mail, Ayesha Merali: ameral@essex.ac..uk

Understanding resilience- Veterans, over 18, required to participate
Please contact: Ayesha Merali
Understanding resilience- Veterans, over 18, required to participate
Please contact: Ayesha Merali
Understanding resilience- Veterans, over 18, required to participate
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Please contact: Ayesha Merali
Understanding resilience- Veterans, over 18, required to participate
Please contact: Ayesha Merali

Appendix D- Participant Consent Form

Consent form

Study Title: Exploring the concept of resilience with veterans: towards an understanding

Researcher Contact Details:

Ayesha Merali

Trainee Clinical Psychologist

University of Essex

Address

ameral@essex.ac..uk

Please initial the boxes

1. I have read and understood the information sheet dated _____

   for the study, title shown above. I have had time to consider the information, ask any questions and clarify any answers to those questions. ☐

2. I understand that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐

3. I understand that relevant sections of data collected during the research can be subject to audit checks by regulatory boards. I give permission for my records to be accessed in these cases. ☐

4. I agree for my participation in this research to be audio-recorded for transcription purposes and understand that my data will be stored securely and will be destroyed after the thesis has been written up, in line with data protection and University policy. ☐

5. I understand where and how to access support should I become distressed during my participation. ☐

6. I agree to take part in the research ☐

_____	_____	_____
Participant initials	Signature	Date

_____	_____	_____
Researcher	Signature	

Appendix E- University Ethical Approval

University of Essex

08 August 2017

MISS AYESHA MERALI
THE OLD CHAPEL
13 BERRYFIELD COTTAGES
EAST BAY
COLCHESTER
ESSEX
CO1 2UF

Dear Ayesha,

Re: Ethical Approval Application (Ref 16090)

Further to your application for ethical approval, please find enclosed a copy of your application which has now been approved by the School Ethics Representative on behalf of the Faculty Ethics Committee.

Yours sincerely,

Lisa McKee
Ethics Administrator
School of Health and Human Sciences

cc. Research Governance and Planning Manager, REO
Supervisor

Colchester Campus
Wivenhoe Park
Colchester CO4 3SQ
United Kingdom

School of Health and Social Care
T 01206 872854
E hsc@essex.ac.uk

www.essex.ac.uk
@Uni_of_Essex /uniofessex /uniofessex

University of Essex

Application for Ethical Approval of Research Involving Human Participants

This application form must be completed for any research involving human participants conducted in or by the University. 'Human participants' are defined as including living human beings, human beings who have recently died (cadavers, human remains and body parts), embryos and foetuses, human tissue and bodily fluids, and human data and records (such as, but not restricted to medical, genetic, financial, personnel, criminal or administrative records and test results including scholastic achievements). Research must not commence until written approval has been received (from departmental Director of Research/Ethics Officer, Faculty Ethics Sub-Committee (ESC) or the University's Ethics Committee). This should be borne in mind when setting a start date for the project. Ethical approval cannot be granted retrospectively and failure to obtain ethical approval prior to data collection will mean that these data cannot be used.

Applications must be made on this form, and submitted electronically, to your departmental Director of Research/Ethics Officer. A signed copy of the form should also be submitted. Applications will be assessed by the Director of Research/Ethics Officer in the first instance, and may then passed to the ESC, and then to the University's Ethics Committee. A copy of your research proposal and any necessary supporting documentation (e.g. consent form, recruiting materials, etc) should also be attached to this form.

A full copy of the signed application will be retained by the department/school for 6 years following completion of the project. The signed application form cover sheet (two pages) will be sent to the Research Governance and Planning Manager in the REO as Secretary of the University's Ethics Committee.

1. Title of project:
   Exploring resilience and beyond in military veterans: towards an understanding

2. The title of your project will be published in the minutes of the University Ethics Committee. If you object, then a reference number will be used in place of the title.
   Do you object to the title of your project being published? Yes ☐ / No ☒

3. This Project is: ☐ Staff Research Project ☒ Student Project

4. Principal Investigator(s) (students should also include the name of their supervisor):

Name:	Department:
Ayesha Merali	School of Health and Human Sciences (HHS)
Dr Leanne Andrews	School of Health and Human Sciences
Dr Ben Donner	School of Health and Human Sciences

5. **Proposed start date**: 07/08/2017

6. **Probable duration**: 18 months

7. Will this project be externally funded? Yes ☐ / No ☒
   If Yes,

8. What is the source of the funding?

9. If external approval for this research has been given, then only this cover sheet needs to be submitted

External ethics approval obtained (attach evidence of approval) Yes ☐/ No ☒

Declaration of Principal Investigator:

The information contained in this application, including any accompanying information, is, to the best of my knowledge, complete and correct. I/we have read the University's *Guidelines for Ethical Approval of Research Involving Human Participants* and accept responsibility for the conduct of the procedures set out in this application in accordance with the guidelines, the University's *Statement on Safeguarding Good Scientific Practice* and any other conditions laid down by the University's Ethics Committee. I/we have attempted to identify all risks related to the research that may arise in conducting this research and acknowledge my/our obligations and the rights of the participants.

Signature(s): .....

Name(s) in block capitals: .....AYESHA MERALI.....

Date: ...17/07/2017.....

Supervisor's recommendation (Student Projects only):

I have read and approved the quality of both the research proposal and this application.

Supervisor's signature: .....

Outcome:

The departmental Director of Research (DoR) / Ethics Officer (EO) has reviewed this project and considers the methodological/technical aspects of the proposal to be appropriate to the tasks proposed. The DoR / EO considers that the investigator(s) has/have the necessary qualifications, experience and facilities to conduct the research set out in this application, and to deal with any emergencies and contingencies that may arise.

This application falls under Annex B and is approved on behalf of the ESC ☑

This application is referred to the ESC because it does not fall under Annex B ☐

This application is referred to the ESC because it requires independent scrutiny ☐

Signature(s): .....

Name(s) in block capitals: ..... W. WILSON

Department: ..... S.H.S.C.

Date: 3/8/17

The application has been approved by the ESC ☐

The application has not been approved by the ESC ☐

The application is referred to the University Ethics Committee ☐

Signature(s): .....

Name(s) in block capitals: .....

Faculty: .....

Date: .....

Appendix F- Demographic questionnaire

Demographic questionnaire

Please answer the following questions about you:

Age: Sex:

Ethnicity:

Your current living arrangements (e.g., alone, house-share, with my dog, with children etc)

Most recent rank in the Armed Forces:

How much combat experience have you had? how many tours/ campaigns/ operations have you been on?

Where were these tours/ campaigns/ operations?

How long did you serve?

When did you leave the Forces?

Do you have a formal mental health diagnosis? If so, please note it down

What age did you leave school?

What was the highest year of education you completed (e.g., year 10/ undergraduate degree)?

What age were you when you joined the Forces?

What encouraged you to join the military e.g. family members being in the military?

Appendix G- Co-produced topic guide

Thank you for taking part in this interview. It should take up to an hour, you can take a break whenever you wish, just let me know. If there are any questions you do not want to answer please let me know, and if you decide at any point that you do not wish to take part we can stop and none of your data will need to be included. Any details that could identify you will be changed (e.g., your name and any locations you mention). Anything that we discuss will stay confidential between us, unless you say something to indicate that there is a risk of significant harm to you or others. I may need to share information with third parties in these cases to ensure your safety and the safety of others. I will discuss this with you first. The only information that I might think about sharing outside of consensual agreement would be if there is felt to be a risk of serious harm to you or someone else e.g. death.

Do you have any questions? Give time to read relevant participant information and sign consent form

I would like to ask you some questions about what you understand the quality of resilience, (bouncing back after difficult experiences or the power to drive recovery) to be and how it is relevant to you and those around you. I have some questions as a guide but we have space to discuss issues that are relevant for you.

NB: it may be that some participants do not know the definition of the word 'resilience'. Provide a dictionary definition and/or synonym.

For example, from Oxford English Dictionary, Oxford University Press: the capacity to recover quickly from difficulties; toughness

Synonyms from Roget's 21st Century Thesaurus, Third Edition: fortitude, backbone, gutsiness, staying power, tolerance, adjustability, flexibility

Suggested topic guide

Meaning of resilience

- What does it mean to be resilient (bounce back after difficult experiences) to you?

- Is resilience you've shown in the military different to resilience you've shown outside the military?

- In what areas of your life does resilience have an impact? In what ways?

- Is resilience more evident in some areas of your life? What are these areas?
  - When do you feel you are resilient?
  - When do you feel less resilient?

- Does your resilience affect the way you recover from adverse events (in what areas of life?) (introduced at P6)

Things that help you be resilient

- What helps you to be resilient?

- What (tools) have you found most useful in helping you to be resilient, or to build your resilience?

Barriers to resilience

- What gets in the way of you being resilient?
- Are there any negatives to being resilient?

- How do other people affect your level of resilience?
- Does your resilience impact the way you seek help from others

Is there anything else you would like to add, or feel like I should have asked about but did not?

Appendix H – Co-researcher and researcher coded section of (the same) interview

Stage Two – Initial Code Generation

Each statement, answer or phrase assigned initial notes and codes.

Collaborator: veteran co-researcher, February 2022

P12 Darren

R1: So what does it mean to be resilient to you?	
D1: if I've got this right, I should have read up on it, to be… to be mentally stable. To be strong enough to be able to live life as such. Have I got that right? 1	1. Fundamentally, resilience is the ability to manage life
R2: So… So there's no right or wrong. It's what its resilience means to you	
D2: It's what I'm saying… It's what it feels to me… It's having the mental ability to cope with life, especially when this troubles… Having the ability to, even times when… When… Even when things get on top of the year-2	2. Resilience is noticeable particularly during times of difficulty and challenge
R3: So something about resilience being important at times when life gets difficult	
D3: yes definitely	
R4: So could you say a bit more about what might be difficult for you?	
D4: Well recently… Well have only just left my job. Well things were getting on top of me in life with my work, I was dragging myself into work each day. Having the mental ability to get in there, because I was literally getting into there almost in tears, because knowing how much pressure I was under each day. Well in the end…… Well although the resilience should have been to get through work, the resilience for me was… Was to make the realisation for me that this needs to stop. And I actually left… -3 Said I can't do this, and now it's the worry then having to start life again with a new job, and… And… It's having the confidence to face this. That's what my worry was. But I'm going to have to do	3. In practice resilience can result in different behaviours dependant on circumstance.
R5 So you mentioned a few different things about resilience. One being toughing it out and going into work every day –	

D5: yeah R6: And… which will from what you describe sounds very difficult, really hard… D6: It was… There was violence… Having to stay each day knowing I was having to fight with people [redacted] now, you know literally having to fight with people that are [redacted] year old, and strong but still having to do this… On several occasions, and at my age that don't heal that quick any more. It's… It's stuff like that, knowing I'm going into that, and also the mental side of things. It… it…you're still going to be under stress you know with all the staff. You know it is also knowing you're going to let other people down… If I'm not there, say injured, and I'm not there to help other people I'm going to let them down as well. And that was starting to get to me… And you know in the end that was getting me down. I said in the end you have to get younger person to take my place. Strange way to look at it, but that's the way that you have to look at it. But if you that's what you want now then that's what's gonna happen was my whole career you know obviously [redacted] at work that rank… And now I have to give everything up in I'm unemployed now, effectively. But I'm happier now than I was when I was in… That's the way I look at it R7: I'm interested to hear more about what you said about the resilience of going on every day and facing what you described, is different to the resilience of actually realising… There was a resilience in actually realising you had had enough. Do you think there's a different kind resilience that it showed. Do you think they're different? D7: I think part of it… Part of it is actually getting used to the idea. I thought I was going in there because I have to make money to pay my mortgage, to keep my family going, you know it's having that realisation hang on I'm causing more stress to my family by going in and coming home in the state that I was coming home in 'un them worrying about me than I ever will do not doing that anymore. And I may never get a job where I make that sort of money you know may be lucky…I am…I may get a job I may….I'm retraining at the moment. I may get a less paying job but I won't be putting through them stress any more. I have a 17 year old son who was terrified of saying anything to me because I was afraid I was gonna snap at him. I didn't realise at the time until later	

where I asked him. But I didn't realise at the time I knew I was tired the now when you realise you know he says you are like a different person that's kind of scary…. I hadn't even noticed myself. And I'm not an aggressive person, you know it's not like he was worried about me hitting him, but it's just not me… Like a say that's quite worrying, and you don't notice it until you're actually away from it… R8: Something… Something made you realise. You describe some sort of realisation and that being resilience… So how did you get to that? D8: You know I think I lost my temper one day… And I said you know I think I'm worth more than this. I went to the doctor… And they said as far as I'm concerned you've [redacted] and they signed me off for a month. I had to go back after the month, I lasted three days before,… I… I went to see a counsellor. And I filled in the stress had questionnaire with the counsellor and they said [redacted]. I said well a disagree with you that I'll have to jump through the hoops in the [redacted]. And then I was lucky enough to go to see a GP who is actually a veteran. [redacted], and she went "well… you need… you know I'm not gonna put you on antidepressants because I disagree with it and I believe what you want to do. She wrote me off and said go and get some proper help. And then I went away and did the [redacted] program and then here. And it's then when you realise when hold on yeah. And I genuinely thought I had to go back, as far as I was concerned. It's just things like that. So I suppose in many ways, yes I lost my temper, but that was enough to make me… Once you step away from it you realise… When you're in it you don't. It's like most things. It isn't until you've actually stepped away from it and looked at it and gone are actually things are different- 4…(pause)…Can't think what to say R9:There's something there, you describe there about stepping away, and also something about being able to notice – D9: But you don't when you're in it… The trouble… Especially… I suppose when I was in the military was the same. When you're in its the only people you socialise with, the only people you have other then your family which you see in another way, and in many ways they perpetuate that	4. In part resilience allows the ability to 'observe' one's situation and reflect.

in the job. It's us and them. When you're in it you don't notice, because you're in amongst other people who were feeling exactly the same… And the myths they come out with. If someone. It's the same… And the same in the military.-5 If you ever go out there, there are no jobs out there. It's not true there are jobs out there. But they keep you in, and they keep you perpetually, and in the army they keep you from age 18 and it's minutes like that keep like that. In [redacted] they play on the… You remember your part of you know, part of society. And if you're out there you're nothing. And it's when you actually get the chance to step away from it you go I'll that's not true. But you don't when you're in amongst it. I suppose it's very much in the University circuit, when you are in University you're a student, and you don't go and worry about living away from being a student. Because you've got a little empire… Not a little empire but a little community and then when you go instead to step out of it it's quite worrying……	

Researcher-coded section of interview

P12 Darren

R1: So what does it mean to be resilient to you? D1: if I've got this right, I should have read up on it, to be… to be mentally stable. To be strong enough to be able to live life as such. Have I got that right? R2: So… So there's no right or wrong. It's what its resilience means to you D2: It's what I'm saying… It's what it feels to me… It's having the mental ability to cope with life, especially when there's troubles… Having the ability to, even times when… When… Even when things get on top of yer' R3: So something about resilience being important at times when life gets difficult D3: yes definitely	Resilience as ability to manage life

R4: So could you say a bit more about what might be difficult for you?	
D4: Well recently… Well have only just left my job. Well things were getting on top of me in life with my work, I was dragging myself into work each day. Having the mental ability to get in there, because I was literally getting into there almost in tears, because knowing how much pressure I was under each day. Well in the end…… Well although the resilience should have been to get through work, the resilience for me was… Was to make the realisation for me that this needs to stop- And I actually left… Said I can't do this, and now it's the worry then having to start life again with a new job, and… And… It's having the confidence to face this- That's what my worry was. But I'm going to have to do	Having too much stress can make it harder to carry on Takes mental effort to deal with challenging (work) circumstances Worry and change as challenges
R5 So you mentioned a few different things about resilience. One being toughing it out and going into work every day –	
D5: yeah	
R6: And… which will from what you describe sounds very difficult, really hard…	
D6: It was… There was violence… Having to stay each day knowing I was having to fight with people. [redacted] now, you know literally having to fight with people that are [redacted] year old, and strong but still having to do this… On several occasions, and at my age that don't heal that quick any more. It's… It's stuff like that, knowing I'm going into that, and also the mental side of things. It… it…you're still going to be under stress you know with all the staff. You know it is also knowing you're going to let other people down… If I'm not there, say injured, and I'm not there to help other people I'm going to let them down as well. And that was starting to get to me- And you know in the end that was getting me down. I said in the end you have to get younger person to take my place. Strange way to look at it, but that's the way that you have to look at it. But if you that's what you want now then that's what's gonna happen was my whole career you know obviously [redacted] at work that rank… And now I have to give everything up in I'm unemployed now,	Recognising your limits as part of aging? Resilience is being able to recognise when not to keep pushing. Cognitive appraisal of risk factors Self-awareness increases with age, and is part of resilience

effectively. But I'm happier now than I was when I was in… That's the way I look at it R7: I'm interested to hear more about what you said about the resilience of going on every day and facing what you described, is different to the resilience of actually realising… There was a resilience in actually realising you had had enough. Do you think there's a different kind resilience that it showed. Do you think they're different? D7: I think part of it… Part of it is actually getting used to the idea. I think part of it… Part of it is actually getting used to the idea. I thought I was going in there because I have to make money to pay my mortgage, to keep my family going, you know it's having that realisation hang on I'm causing more stress to my family by going in and coming home in the state that I was coming home in 'un them worrying about me than I ever will do not doing that anymore And I may never get a job where I make that sort of money you know may be lucky I am…I may get a job I may ...I'm retraining at the moment. I may get a less paying job but I won't be putting through them stress any more. I have a 17 year old son who was terrified of saying anything to me because I was afraid I was gonna snap at him. I didn't realise at the time until later where I asked him. But I didn't realise at the time I knew I was tired the now when you realise you know he says you are like a different person that's kind of scary.… I hadn't even noticed myself. And I'm not an aggressive person, you know it's not like he was worried about me hitting him, but it's just not me… Like a say that's quite worrying, and you don't notice it until you're actually away from it… R8: Something… Something made you realise. You describe some sort of realisation and that being resilience… So how did you get to that? D8: You know I think I lost my temper one day… And I said you know I think I'm worth more than this. I went to the doctor… And they said as far as I'm concerned you've [redacted] and they signed me off for a month. I had to go back after the month, I lasted three days before,… I… I went to see a counsellor. And I filled	Adapting for those around you. Being resilient as a family. Considering those close to you in how you are resilient Group or family resilience?

in the stress had questionnaire with the counsellor and they said [redacted]. I said well a disagree with you that I'll have to jump through the hoops in the [redacted]. And then I was lucky enough to go to see a GP who is actually a veteran. [redacted], and she went "well… you need… you know I'm not gonna put you on antidepressants because I disagree with it and I believe what you want to do. She wrote me off and said go and get some proper help. And then I went away and did the [redacted] program and then here. And it's then when you realise when hold on yeah. And I genuinely thought I had to go back, as far as I was concerned. It's just things like that. So I suppose in many ways, yes I lost my temper, but that was enough to make me… Once you step away from it you realise… When you're in it you don't. It's like most things. It isn't until you've actually stepped away from it and looked at it and gone are actually things are different…(pause)…can't think what to say	Resilience requires adversity to have passed. Resilience happens after adversity Need to look back and reflect on situations.
R9:There's something there, you describe there about stepping away, and also something about being able to notice –	
D9: But you don't when you're in it… The trouble… Especially… I suppose when I was in the military was the same. When you're in its the only people you socialise with, the only people you have other then your family which you see in another way, and in many ways they perpetuate that in the job. It's us and them. When you're in it you don't notice, because you're in amongst other people who were feeling exactly the same… And the myths they come out with. If someone. It's the same… And the same in the military- If you ever go out there, there are no jobs out there. It's not true there are jobs out there. But they keep you in, and they keep you perpetually, and in the army they keep you from age 18 and it's minutes like that keep like that. In [redacted] they play on the… You remember your part of you know, part of society. And if you're out there you're nothing. And it's when you actually get the chance to step away from it you go I'll that's not true. But you don't when you're in amongst it. I suppose it's very much in the University circuit, when you are in University you're	collective resilience involves thinking in similar ways. Collective resilience and feeling the same way. Being able to carry on when in a group of people feeling the same way Military resilience is collective resilience . Sense of belonging to a group. Anxiety of being on the outside Sense of belonging or on the outside.

a student, and you don't go and worry about living away from being a student. Because you've got a little empire… Not a little empire but a little community and then when you go instead to step out of it it's quite worrying….	

Appendix I- Table of initial, provisional and final theme development

	1	2	3	6	5	6
Initial themes	The idea that opportunities can challenge-			Managing emotional responses/ developing self-reflection Mental ill-health as trouble with emotional responses	changing group identity as time of particular vulnerability- all participants	A particular type of resilience ("cracking on") may be 'wrong' type
Initial themes	need a reason to maintain functionality (links to military providing this reason- theme 6)				Resources that are required to be resilient provided for by the group you belong to- military, family, etc.,	Resilience is trained into you in the military. -Other types of training also mentioned
Initial themes	limit on the number of challenges one can face-			Process of experiential learning	Resilience requires relationships- less need for individual skills?	Keep functional as part of military duty/obligation to mission- all p's linked to needing to find this meaning once leave military- consideration of theme 1
Initial themes	the opposite view- knowing when not to carry on	the opposite point of view- keep busy, don't slow down		Resilience can be recovery from mental ill health	Help needs to be meaningful- e.g., issues around diagnosis- how does this apply to veterans?	Military provides resources for military resilience
Initial themes	Group or unit functionality	Different 'military' and 'civilian skills'- banter for example (social skill?)		How you manage as an individual develop self	negative aspects of group identity- group think and myths	Military resilience about working as part of a team-
<u>Provisional themes</u>	Adapting, doing what you know until you know more. Negative changes or stress on individual's	e.g., mental strength, discipline, knowing your own needs and	different strategies at different time points, priorities,	Help not always helpful, requires time and space to allow for learning, lack of understanding of	going from military to veteran to civilian, belonging , meaningful relationships, help that is meaningful according to self-identified group membership	training, independence within a group, mission comes first, know how to adapt to situations

	system and wider systems OR opportunities	limits, problem solving, coping	change over time	military context/ trauma as part of transition?		
Final theme construction	1. Adapting in a way that promotes functionality when faced with challenges (recognising the need to adapt)	2. Resilience can involve individual skills and strategies, (therefore can differ for different people)	3. Resilience as a slow and considered process, (Resilience and coping not the same)	4. Process of HOW you manage your own reactions to adversity (especially emotional responses)	5. Group identity and membership (defines what resilience means) required in order to be resilient	6. Resilience is a part of being a veteran/ military identity
Final themes	**1. Functional adaptation**	**2. Resilience is a slow process- includes skill development**		**3. Process of managing reactions, particularly emotional responses**	**4. Group membership and identity**	**5. Part of military identity**
SUGGESTED FINAL THEME NAME	**Adapting to adversity**	**A slow process**		**Recognising/manging emotional responses**	**Group membership**	**Military training**
Number of participants	**13**	**13**		**13 (own responses) 12 (emotional responses)**	**16**	**16**

Appendix J- researcher coded section of interview, with initial coding, provisional (sub)themes and potential THEMES

P1: Matt	Initial coding, provisional (sub)themes and potential THEMES
R15:) I wonder if you could say a bit more about resilience or bouncing back. Is that different when you're in the military and different when you're out and readjusting to life. Is there a difference?	
M16:) Yeah cause in the [redacted] you've just got that the whole persona and stuff. You've just got to crack on and get on with things… it's just the way of life in the…in the military, if you've got a problem you just get on with it. Where in civilian street it's a lot you've haven't…you haven't…got that…I dunno…you haven't got that that grand scale of things of everyone hasn't got the same problems err…In the military everyone does the same thing day to day and it's just routine, you just get on with it. Where in civilian life everyone's doing their own things the whole time. You're on your own at that point so gradually that do just break you down. Cause you think hang on when I was in the military loads of people had the same problems and we're all just getting on with it so it must be normal where in civilian life where you're there on your own and everyone is doing their daily thing and you're just stuck there on your own. That's the only difference that I can see when you're in the civilian world you're back to being yourself and not…errrr…..errrr (pause)	Something bigger than the self (grand scale) in the military- COLLECTIVE Getting on part of the routine in military life All in it together in the military Having the same problems in the military Military and civilian problems are different Have to learn to be on your own Civilian life breaks you down Feel stuck in civilian life Military norms and civilian norms are different Being yourself as less than being in the military
(R16:) There's a couple of things to pick up on. You mentioned being on your own a couple of time. I wondered is there a loneliness or something?	
(M17:) Yeah while you're in [redacted] you are just a group of lads and all your problems are group problems as such (pause?)	Group of lads Easier to share problems with people like yourself?

(R17:) Do you talk about them together? (M18:)No but you just know everyone has got the same problems cause you've all gone through the same things so...it's just you don't need to…cause everyone has got the same problems. Like I say you just get on with it 'cause everyone is getting on with it. Where then…when you then come home and you're sitting there with your family and they don't have the same problems that everyone else seemed to have when you were in the [redacted].….you think 'hang on I am different from everyone else around me'?... where before I could just get on 'cause everyone had the same problems. Where then you're there in civilian life that don't work like that cause everyone else is doing their own thing and getting on with being happy and you're sat there being depressed…you do start to notice things more	Sense of belonging in the military Shared experiences make you part of the same group You get on the same way other people do Civilians don't have the same problems The army makes you different (to your family) Feeling different makes you question who you are Civilians as concerned with themselves Civilians are happy Feeling different makes you depressed CHANGING OF 'CULTURAL' NORMS BELONGING TO A GROUP COMES OF SHARED EXPERIENCES MILITARY BONDS ARE RESILIENCE

Appendix K- Example of reflective memo written after an interview

Reflections on the interview (P1, Matt; 20/10/2017):

I was surprised at 'how open' Matt was regarding what he had struggled with and how he had been able to get through his struggles. I think I was expecting less self-reflection, I am not sure why this might be the case, and this is something I will keep needing to reflect on. I wonder whether prior to Matt feeling there was no hope for him there was little time for him to get to know himself and his (emotional) reactions. There appeared other things for Matt to manage in addition to military experiences, particularly how to feel comfortable and part of civilian life. I felt very sad at hearing how lonely civilian life felt for him even when there were close people around. I realised I really can't understand what the reality of military life feels like and was like, however, in Matt describing a sense of being different and not normal in civilian life I was surprised at how 'close to home' this felt. This resonates with some of own experiences as an ethnic minority and his depth of feeling surprised me. I think I expected something different, perhaps that experiences of war and loss would supersede in some way the experiences that came before and after, this does not appear to be the case for Matt at least. In the room with Matt I was perhaps a little surprised at how aware and able to manage his emotions he seemed, even when he spoke of what appeared to be 'rock bottom' moments for him. He seemed he most emotive when he spoke of loneliness, which I think is important, and something I found difficult to hear and sit with. I felt myself wanting to do something for Matt but realised Matt, with help he found meaningful, had done that for himself and perhaps that may be a part of his resilience.

Appendix L- Excerpt from researcher reflection on the process of co-production and analysis

Reflections on the co-produced process of analysis: (15/06/2022):

It had been some time since I revisited coded data, I thought that I might struggle to remember and 'feel' my way into the data. I was surprised how this wasn't the case when I revisited and continued with the process of analysis. I remembered conversations with the co-researchers and I remembered interviewing Matt well, how he came across, his facial expressions, his movements, his pauses, when speech slowed down, picked up pace and when he seemed more and less animated. I revisited the recorded interview and was surprised that I remembered Matt in such a detailed way and that it chimed with how I heard his interview.

I think this was important in that for me, participants words and how they spoke them had come alive in a way that I had not realised would be the case when I decided to undertake qualitative research. It felt important to do that justice in my analysis. I noted how Matt's reflections and coded sections appeared to resonate with other participants, particularly around transition experiences and the importance of military connections as a route to resilience. I felt I could code and start to theme the interviews in many ways. I found listening to the interviews and reading across the full data set started to clarify to me what was important to bring out and 'in common' across interviews. I also realised that I would need to be selective. In both listening and reading participants interviews, it was perhaps possible to identify through intonation and my memories of participants facial expressions, body language etc., where 'the most important' sections relating to the question of what resilience were in participants' interviews. Discussions with the co-researcher on 'how' to conduct thematic analysis, 'where' and 'what' to code, and the process of developing themes was vital in developing my understanding of the method of analysis we were using. I also hoped that I was more equipped to go with and 'notice' participants views than I would have been without co-production, through developing from the co-researcher an understanding of 'veteran issues' that I had no familiarity with prior to the study. I was struck throughout the process of coding and analysis just how important fitting in to civilian life was for participants and how confusing and isolating 'culturally normative' differences were in the process of 'becoming a civilian'. This felt very important and relevant to how veterans were able to show, develop and express resilience and was something I had not expected to 'find' in the data.