How do Male Military Veterans Cope with Psychological Difficulties?

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22nd June 2015

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Submitted in partial fulfilment of the Doctorate in Clinical Psychology,
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Acknowledgements

I would firstly like to thank my supervisors for their invaluable help and guidance throughout the research process. I would also like to express my sincere gratitude to all the staff at the Military Veteran Service for helping with recruitment and I would especially like to thank Keeley Hardman for all her hard work in ensuring I met my target, it would not have been possible without her. Huge love and appreciation also goes to my boyfriend, family and friends who have supported me through all the ups and downs, understood when I virtually disappeared for a few months and been there on the telephone whenever I have needed a boost. Lastly, I would like to give my heartfelt thanks to all the veterans and military personnel who made this research possible. I have been overwhelmed by their enthusiasm, strength and dedication to help others and show their appreciation for the help they have received that has obviously meant so much.

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Introductory Chapter

This thesis consists of three sections: a systematic review, an empirical paper and the appendices, which are intended to support the empirical paper. The two papers are intended for publication in different journals and are written in the style required by those journals.

Thesis Overview

In the UK, a military veteran is defined by the government as anyone who has served in the armed forces for at least one day; they will simply be referred to as veterans from here on. The mental health of veterans is very much in the public awareness, especially due to the recent conflicts in Iraq and Afghanistan. Research dedicated to this area has mostly used quantitative methodologies, focused on Post-traumatic stress disorder and has been conducted in the United States. The research, and the media, has a tendency to give a more negative overview of veteran's mental health, and their health outcomes, by emphasising such difficulties as substance misuse and offending behaviour. Therefore the aim of this thesis was to start to fill in the gaps. This was achieved by reviewing and adopting qualitative methodologies and involving British veterans. The research aimed to explore the possibility of positive change after military service, and veterans own views on how they experience and cope with psychological difficulties. By knowing more about veterans' experiences, from veterans' themselves, we will be more able to inform services and tailor the support to improve their outcomes and enhance their well-being.

The term Post-traumatic growth (PTG) is relatively new, but the concept of growth out of adversity dates back to at least the 1960s. PTG was introduced by Tedeschi and Calhoun to describe positive psychological change resulting from experiencing traumatic events. It is conceptualised as a long-term coping strategy for ongoing stress following adversity (Tedeschi & Calhoun, 2004). Positive growth has been indicated in the experiences of people after a range of traumatic events but the types and levels of trauma experienced by military personnel are unique. This is because they may endure multiple and chronic trauma, they have voluntarily put themselves in harm's way and they could experience combat exposure both as victim and perpetrator (Linley & Joseph, 2004; Larner & Blow,

2011; Larner, 2013). Research suggesting that veterans can experience PTG has tended to focus on quantitative aspects of prevalence and influential factors, with no qualitative review of how veterans actually experience PTG. Chapter one of this thesis is a systematic review of the qualitative literature exploring veterans' subjective experiences of PTG after military service. It aims to highlight those areas more prone to growth and to help inform interventions that may facilitate this process.

To enable us to inform interventions to promote positive change, it is important to know how veterans are coping with psychological difficulties from their own perspective. Chapter two of this thesis is an empirical study that explored the way veterans from the North West of England, who had accessed a veterans' psychology service, are coping with psychological difficulties. Q Methodology (Stephenson, 1935) was used to provide a systematic and non-threatening way to collect a large range of subjective viewpoints. The paper discusses the clinical implications of the findings and recommendations for future research within the context of the strengths and limitations of the study. It is hoped the findings will increase the awareness of this complex area, highlight the need for more research and aid the development of more targeted interventions focused on those more adaptive and growth promoting coping processes.

Chapter 1 - Systematic Review

How do Military Veterans Describe their Experience of Post-Traumatic Growth after Serving in the Military? A Systematic Review of Qualitative Data. [1]

Heather Ferguson

[1]To be submitted to: *Clinical Psychology Review* (Page limit 50 pages)

Abstract

It is well established that military veterans can experience psychological difficulties after military service, but they can also experience positive effects, such as post-traumatic growth. Various factors, such as different coping strategies, may impact on a veteran's ability to grow from traumatic experiences. However, there is little research exploring veterans' subjective experiences of post-traumatic growth. This systematic review is the first to synthesise qualitative findings about how veterans describe their experience of post-traumatic growth, after military service. Six qualitative studies and four mixed-method studies were analysed, with the use of inductive thematic analysis, which resulted in six over-arching themes and six subthemes. Five of the overarching themes related directly to the factors of the Post-traumatic growth inventory (Tedeschi & Calhoun, 1996); 'relating to others', 'new possibilities', 'personal strength', 'spiritual change' and 'appreciation of life'. The sixth theme, 'positives in the past', demonstrated post-traumatic growth through having the ability to look back on traumatic experiences and see the positives. Clinical implications are discussed, within the context of the limitations of the included studies and the review process, with recommendations for further research.

Key words: Military, Veterans, Post-traumatic Growth, Qualitative, Systematic Review.

Introduction

There has been increased awareness of the negative consequences of military service on military veterans' mental health, such as experiencing post-traumatic stress disorder (PTSD). This increase is due partly to enhanced media coverage, especially relating to the recent conflicts in Iraq and Afghanistan. Recently, the referral rates to mental health services for veterans in the UK have increased. The charity organisation, Combat Stress, reported a 26% increase in referrals between 2014 and 2015 (BBC News, 2015). However, there has also been a developing recognition of positive change that can come from traumatic experiences during military service, such as experiencing growth. Personal growth out of adversity has been recognised for some time (Joseph & Linley, 2006). Victor Frankl (1963), who famously survived the holocaust, described how the meaning he gave

difficult events was the reason he experienced growth. Meaning-making is important in experiencing growth, as meaning is incorporated into a person's 'global meaning system' or the system is adjusted in a reappraisal process, to address the discrepancy between original and new assumptions or beliefs (Joseph & Linley, 2005; Larner, 2013).

The term Post-traumatic growth (PTG), was introduced by Tedeschi and Calhoun (1996). It refers to the phenomenon of "positive psychological change experienced as a result of the struggle with highly challenging life circumstances" (Tedeschi & Calhoun, 2004, p. 1). PTG is not about reacting to trauma without stress, it is a long-term way of coping in response to ongoing stress after trauma (Dekel, Mandl & Solomon, 2011). Tedeschi and Calhoun developed the Post-Traumatic Growth Inventory (PTGI; 1996), an assessment of positive outcomes after trauma. They found three key areas of change that may form part of the PTG process: first, *a sense of self*, a person may see themselves differently with increased strength, understanding and acceptance of their weaknesses; second, *life philosophy*, they may have greater appreciation for what life holds and what is important and third, *relationships*, they may experience increased compassion, value and closeness (Joseph, Murphy & Regel, 2012; Tedeschi, 1999). From these three areas they identified five themes of possible growth; "appreciation of life, personal strength, relating to others, spiritual change, and new possibilities" (Larick & Graf, 2012, p. 221). PTG is an important concept in developing understanding of the reaction to and recovery from trauma, especially with the new wave of positive, strength-based psychological approaches (Joseph, 2009; Larick & Graf, 2012). Rather than focusing on reducing symptoms they emphasise building positive change through coping (Joseph, 2009).

Studies have successfully identified PTG in people who have experienced a range of trauma such as assault (Kelim & Ehlers, 2009), terrorism (Woike & Matic, 2004) and burns (Baillie, Sellwood & Wisley, 2014). Although PTG can be generalised in some ways to all trauma, evidence suggests that the type of trauma, or the population involved, effects the experience of PTG (Larner & Blow, 2011), such as having a life-threatening illness (Hefferon, Grealy & Mutrie, 2009). Similarly, the incomparable experiences of military service, such as volunteering to put yourself at risk, facing

multiple or chronic trauma and being placed in the role of perpetrator and victim, need to be explored (Larner & Blow, 2011; Larner, 2013; Linley & Joseph, 2004).

PTG has been identified in military veterans (Pietrzak el al., 2010; Tsai, El-Gabalawy, Sledge, Southwick & Pietrzak, 2015) and in specific veteran populations such as those who served in Iraq or Afghanistan and sustained an amputation (Benetato, 2011). Tsai et al. (2015) analysed survey data from 3157 veterans in the US, including the use of the Post-Traumatic Growth Inventory-Short Form, a validated measure of the PTGI (Cann et al., 2010). They found that 50% reported moderate levels of PTG; 72% of those had also reported levels of PTSD. Factors associated with higher PTG were feeling more socially connected, 'intrinsic religiosity' and having purpose in life. The relationship between PTSD and PTG, was also found in Israeli ex-prisoners of war and veterans from the Yom Kippur War where those with PTSD reported higher levels of PTG (Dekel, Ein-Dor & Solomon, 2012; Zerach, Solomon, Cohen & Ein-Dor, 2013).

In some cases, PTG is positively related to exposure to combat (Dekel, et al., 2011; Gallaway, Millikan & Bell, 2011), perseverance and perceived support within the military unit (Pietrzak, el al., 2010), active coping (Dekel, et al., 2011) and religion (Tait, 2013; Trevino, Archambault, Schuster, Richardson & Moye, 2012). Persian Gulf War veterans showed associations between their perceptions of the level of threat while deployed, to the 'appreciation of life' factor on the PTGI. The factors of 'personal strength' and 'relating to others' were associated with the level of social support received after deployment (Maguen, Vogt, King, King & Litz, 2006). However, suicidal ideation has been found to have a negative association with PTG (Gallaway et al., 2011).

There have been numerous quantitative studies illustrating the prevalence and influential factors of PTG in veterans. However, there has not been a review of qualitative findings relating to how veterans themselves describe their experience of PTG. Therefore, the aim of this review is to synthesise the qualitative evidence related to veterans' subjective experiences of PTG after military

service. This will further enhance our understanding of the phenomenon and our ability to inform interventions to facilitate this process.

Method

Search Strategy

The electronic databases Medline, PsycINFO, CINAHL and Scopus were searched up to April 2015 using the search strategy below. The search strategy was designed to capture all papers looking at PTG in veterans and was not specifically tailored for qualitative methodologies as preliminary searches identified a dearth of this type of literature. Therefore, the strategy remained broad in order to identify all relevant papers. There were no exclusion criteria relating to specific population age, setting or date of publishing.

Search strategy: the following search terms were employed:

1. post-traumatic OR posttraumatic OR post traumatic
2. growth
3. 1 AND 2
4. veteran OR military veteran
5. ex-service personnel OR ex-servicemen OR ex-serviceman OR ex-forces OR ex-military
6. 4 OR 5
7. 3 AND 6

Study Selection

The resulting citations were screened to identify potentially suitable studies for inclusion. Due to the dearth of qualitative literature in this area, papers that did not specifically use the term PTG in relation to their findings, but terms relating to other similar forms of growth were included. References within the included papers were hand searched, but this resulted in no further relevant papers. Full text copies of those relevant studies were obtained and assessed independently with the following criteria:

Inclusion Criteria:

1. Study population - adults who had previously served in the military, in any country.
2. Methodology - qualitative methods of data collection and analysis, solely, or as part of a mixed methodology.
3. Subject - PTG in the first instance, or other forms of growth not referred to specifically as post-traumatic in the second instance e.g. psychological growth, personal growth.
4. Published language – English (due to lack of resources for translation).

Exclusion Criteria:

1. Intervention studies.
2. Solely quantitative methodology.
3. Only involved the concept of growth through the use of quantitative measures, e.g. PTGI (Tedeschi & Calhoun, 1996).

Initial searches resulted in a set of 210 papers, reducing to 142 after removing duplicates. After initial screening 125 studies were excluded due to lack of relevance, see Figure 1 for further detail (p.9). Studies involving interventions were excluded as the aim of the review was to explore experiences of personal growth after military service, as opposed to growth possibly resulting from a targeted intervention. Initial screening led to 17 full text papers being reviewed; where available, authors were contacted when the full text was unavailable or not available in English. This led to seven studies being excluded, as detailed in Table 1 (p. 10). One study (DeRoon-Cassini, 2008) was excluded because it represented the original thesis and data which was replicated in a published paper (DeRoon-Cassini, De St. Aubin, Valvano, Hastings & Brasel, 2013). The search strategy results are illustrated in an adapted version of the Preferred Reporting Items for Systematic Reviews (PRISMA) diagram (Figure 1, p. 9; Moher, Liberati, Tetzlaff & Altman, 2009). Final eligibility of papers was negotiated with a research supervisor (J.M.); this resulted in 10 articles being included in the review.

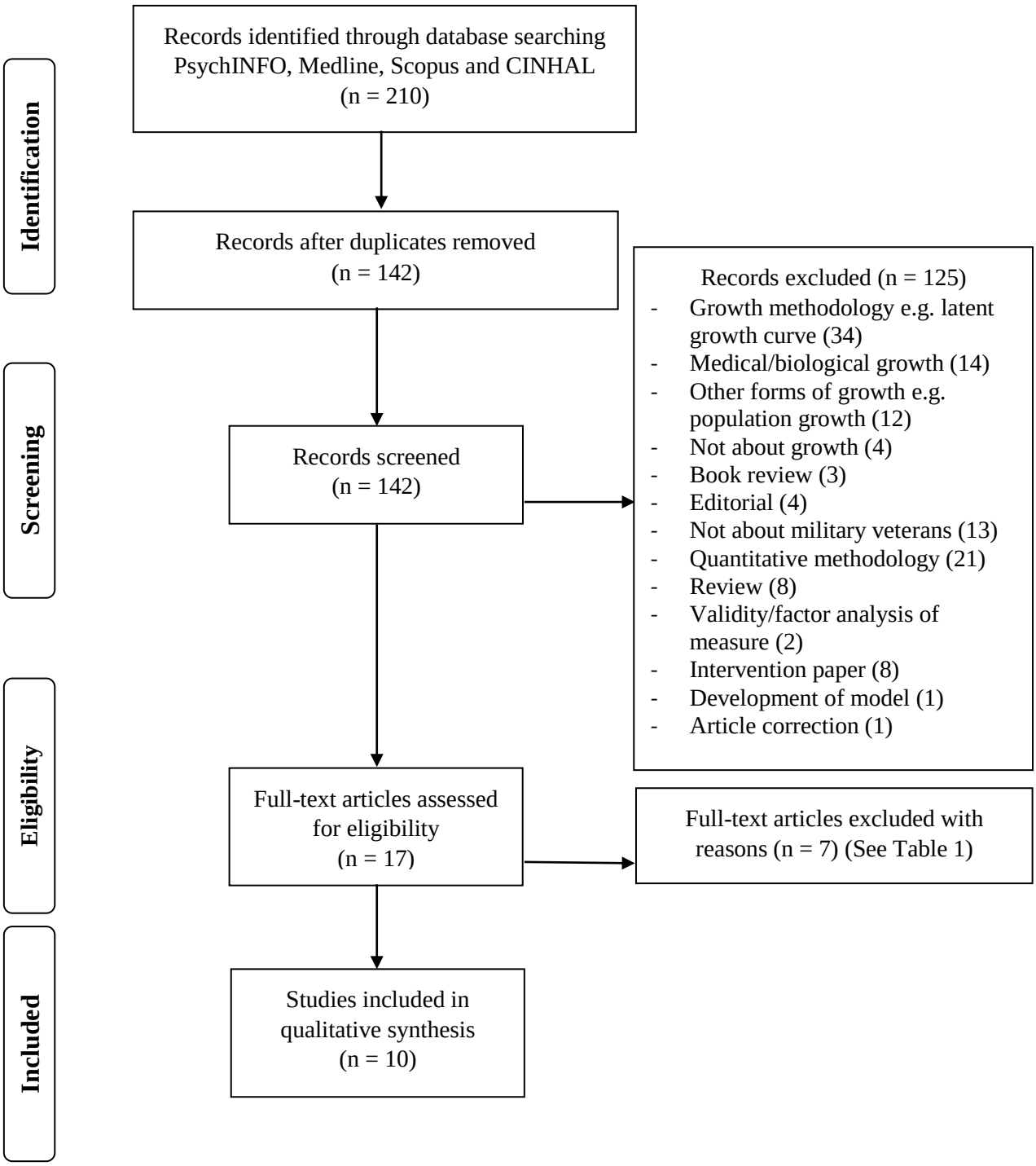

Figure 1 - Flow diagram of systematic review process

Table 1 - Final excluded papers with reasons

Author	Year	Reason
DeRoon-Cassini	2008	Thesis replicated in published paper from peer reviewed journal (DeRoon-Cassini et al., 2013)
de la Fontaine*	2013	Not available online, emailed author but no reply
Krutiš, Mareš & Ježek	2011	Not published in English, emailed author but no reply
Ogden et al.	2011	Solely quantitative methodology
Steger, Ownes & Park	2015	Solely quantitative methodology
Syme, Delaney, Wachen, Gosian & Moye	2013	Solely quantitative methodology
McKee*	2009	No use of qualitative data collection or analysis methods

*= thesis

Data Extraction

Details of study design and findings were extracted using a pre-designed data-collection form. Details of quality were extracted with the aid of the qualitative Critical Appraisal Skills Programme (CASP) tool (CASP, 2013). This tool required identification of whether or not relevant information was present in the article with a yes (√) or no (X) rating. A rating of not applicable (N/A) was used to represent an inability to rate this section. This was completed by the main author (H.F.) and a random sample of two papers were verified by an independent researcher with the same level of training.

Method of Synthesis

The aim of this review is to synthesise and assimilate the relevant findings. Therefore, the data extracted were synthesised using thematic analysis based on the work of Braun and Clarke (2006). The data are displayed in tables and summarised in a narrative description. Relevant findings, similarities and differences are described.

Results

Study Characteristics

Characteristics of included studies are illustrated in Table 2 (p. 13). Of the 10 included studies, four were doctoral theses, six were published in peer reviewed journals. Nine were conducted in the United States (US) and one was conducted in Australia (McCormack & Joseph, 2014). Four studies used mixed methodology and six used only qualitative methods. All studies were published between 2010 and 2014 with the exception of Elder and Clipp (1989). Participant numbers ranged from eight to 149. Four studies only included male participants and in the remaining six, the percentages of male participants ranged from 78.9% to 96%.

Participant inclusion criteria varied considerably, involving veterans who had served in Iraq, Afghanistan, World War II and the Korean War (archived data), the Vietnam War and those who served specifically in Operation Desert Storm (Gulf War). Specific experiences were targeted such as spinal cord injury, diagnosis of oral-digestive cancer and those who had been held captive in Vietnamese re-education camps. Nagle (2014) investigated Reserve veterans who had returned to previous employment after deployment. Five studies specified that participants had been exposed to combat while deployed. There was considerable heterogeneity in the methods of data analysis employed; three studies used principles of grounded theory, one completed coding using an explicit theoretical lens, three used differing phenomenological principles, one used constant comparison and one used consensual qualitative principles. It is important to note that the aims of the studies were also different, only four specifically explored growth, the remaining studies found growth related themes within their results.

As reported earlier, studies were included that did not specifically use the term PTG, but other terms related to growth, which identified relevant themes. Seven studies referred to PTG (Jahn, Herman, Schuster, Naik & Moye, 2012; Kato, 2010; Larick & Graf, 2012; Larner, 2013; McCormack & Joseph, 2014; Michna, 2013; Nguyen et al., 2014). Other terms were sometimes used interchangeably with PTG such as cancer-related growth, personal growth and psychological growth. In the remaining

three studies, one used the term ‘positive growth’ (DeRoon-Cassini et al., 2013) and two used the term ‘personal growth’ (Elder & Clipp, 1989; Nagle, 2014).

The study by Elder and Clipp (1989) is distinct, as they used a longitudinal design with analysis of archived data. Therefore, they did not use sampling and the sampling procedures from the original studies were not described. Eichorn, Clausen, Haan, Honzik and Mussen (1981) described the original studies as three separate longitudinal studies, later combined into larger intergenerational studies. The studies collected data relating to cognitive ability, personality, and social and biological factors, at different stages from birth into adulthood, between 1928 and 1972. The archived data from those participants who were involved in the longitudinal data collection and went on to serve in the armed forces were included in this study. This study does not refer to PTG, but it was conducted before the term PTG was introduced by Tedeschi and Calhoun in 1996 and demonstrates the same concepts now referred to as PTG.

Table 2 - Characteristics of papers included in the review

No	Author	Year	N	Participants	Sampling Method	Method	Data collection	Qualitative Data Analysis	Aim
1	DeRoon-Cassini et al.†	2013	79	Military veterans with spinal cord injury (96% Male)	Described as purposive sampling	Mixed – cross-sectional	Semi-structured face-to-face interviews	Data analysis based on grounded theory	To ascertain meaning-making themes for veterans following spinal cord injury and how these relate to distress and well-being
2	Elder & Clipp†	1989	149	Male military veterans exposed to combat during World War II and the Korean War	Archived data taken from three longitudinal studies	Mixed – longitudinal	Archived data with original methodology involving interviews	Unclear	To explore veterans experience of combat and the meaning of this in later life and to link these to psychosocial functioning pre and post-war
3	Jahn et al.†	2012	133	Military veterans with a diagnosis after age 50 and who had had treatment for oral-digestive cancer (97.7% male)	Described as purposive sampling	Mixed – longitudinal	Mixed-method structured face-to-face interviews	Coding completed using an explicit theoretical lens using the Benefit Finding Scale to identify themes	To explore how combat exposure and posttraumatic stress relate to distress and growth in cancer survivors.
4	Kato*	2010	19	Military veterans who served in Iraq/Afghanistan 2001-2010. Minimum four months post leaving the military and aged 18-50. (78.9% male)	Purposive and snowball sampling	Described as cross-sectional	Semi-structured face-to-face interviews	Grounded theory	To describe the experiences of adjustment, from military to civilian life, of soldiers who served in Iraq and Afghanistan

5	Larick & Graf†	2012	59	Military veterans (83.1% male)	Described as convenience sampling (those who had access to computers)	Described as mixed - cross-sectional	Online survey – four open questions	Constant comparison	To examine combat veterans experiences of how compassionate acts and other positive experiences in the military impacted on personal growth
6	Larner*	2013	15	Male military veterans exposed to combat during the Iraq and Afghanistan conflicts	Snowball sampling	Described as cross-sectional	Semi-structured face-to-face interviews	Grounded theory	To explore the process combat veterans go through to deal with combat trauma, focussing on meaning-making
7	McCormack & Joseph	2014	9	Male military veterans who had served in the Vietnam War	Described as convenience sampling	Described as cross-sectional	Semi-structured face-to-face interviews	Interpretive phenomenological analysis	To explore the phenomenon of psychological growth and how Vietnam veterans have redefined their experiences over time, after being exposed to war, bitterness, guilt and blame when they returned from war
8	Michna*	2013	8	Military veterans who served during the Operation Desert Storm Gulf War (87.5% male)	Convenience and criterion sampling	Described as cross-sectional	Semi-structured interviews via skype videoconference	Phenomenological analysis based on a heuristic approach	To explore how combat veterans transform the meaning of traumatic events using cognitive self-appraisals and corrective emotional

									actions toward the achievement of personal growth.
9	Nagle*	2014	9	National Guard or Reserve military veterans who had returned to their previous employment after combat deployment (100% male)	Purposive and snowball sampling	Described as cross-sectional	Semi-structured interviews completed face-to-face and via skype videoconference	Descriptive phenomenological analysis	To explore the subjective experience of reintegration into the workplace after an extended period of time deployed as part of the Reserve Component to Iraq or Afghanistan.
10	Nguyen et al.	2013	14	Male Vietnamese military veterans who had been imprisoned in a Vietnamese re-education camp and now live in the US	Described as purposive sampling	Described as cross-sectional	Semi-structured face-to-face Interviews conducted in Vietnamese	Consensual Qualitative research methodology	To examine the long-term effects of re-education camps on male Vietnamese veterans

*= thesis, †= mixed methods

Quality Assessment

Assessment of methodological quality is reported in Table 3 (p. 19). Studies were rated as to whether each component was present, rather than using a scoring system, due to the heterogeneity of the studies. Quality varied within the studies; common weaknesses were identified in recruitment strategies, reflexivity and reporting of how ethical issues were considered.

In many studies the sampling and recruitment strategies were unclear, often there was no justification for participant selection. In the study by Michna (2013), there was no justification for recruiting only veterans who had served in Operation Desert Storm and in the work of Jahn et al. (2012), the authors did not explain the decision to only include oral-digestive cancer. In some cases the recruitment strategy may have introduced bias, such as in the study by Kato (2010), for which participants had to attend a specific college or know someone who did; and the Nguyen et al. (2013) study, participants were family acquaintances of the research team. There was an overall lack of information concerning why people chose to participate or not.

Reporting of reflexivity was lacking in most studies; the relationship between researcher and participant was not considered in development of research questions or data collection, nor any analysis of potential bias. An exception was the study by Nguyen et al. (2014), where the authors discussed the role of the bilingual researchers who conducted the interviews in Vietnamese and how cultural differences were thoughtfully considered. However, they did not discuss the impact of participants being acquaintances of the research team, as reported earlier. Also, Larner (2013) explicitly discussed his role as the researcher, how it may be impacted by his own military background and his occupation as a marriage and family therapist.

Another concerning issue was the lack of reporting about how ethical issues were considered. In most cases there was evidence for how the research was explained to participants, but there was often no discussion about issues raised by the study, nor any suggestion of safeguards for participant well-being during or after the study. Consent and confidentiality issues were usually acknowledged, but

there was little explicit indication that ethical approval had been gained. Most studies reporting approval from institution review boards but this remains unclear as to what ethical standards were adhered to.

Research design appeared appropriate in relation to the aims overall, except in the study by Jahn et al. (2012). The qualitative element seemed secondary to the quantitative element especially as a self-report measure of PTG, the Benefit Finding Scale (BFS; Tomich & Helgeson, 2004), was used to guide coding rather than themes being developed inductively. This is also reflected in the low quality of the data analysis and minimal statement of qualitative findings. While the study offers some insight into the experience of PTG in veteran cancer survivors, the focus is mainly on predictive factors.

It is again worth noting that the Elder and Clipp (1989) study is distinct, due to the use of archived data, it did not align well with the CASP tool. Therefore, it was not rated on recruitment strategy, reflexivity or ethical issues. Some of these details were recorded in the original studies; for example, recruitment strategies varied but included sampling every third birth in a location in the US and sampling from one 'junior high school' (Eichorn et al., 1981). There was no explicit description of ethical procedures or reflection. The qualitative data collection and analysis procedures are unclear, although the authors state that interviews and Q methodology were used. Q methodology is a hybrid of qualitative and quantitative methods developed by Stephenson (1935). The study was assessed to be low in quality in the description of qualitative findings and suggested implications on research and practice. However, it is worth considering how much research and reporting has moved forward, especially relating to ethics and reflexivity, from the original studies in the 1920s to 1970s and more so in the last 25 years. This study is the only one highlighting the experience of growth after military service into later life, so it does offer some valuable insights.

Quality assessment of qualitative studies is a contentious topic, as is the premise of systematically reviewing qualitative research, as it has been argued that it is inappropriate to apply principles of rigour relevant to quantitative research to qualitative studies (Booth, 2001). However, the recognised

authority on systematic reviews, The Cochrane Collaboration, now acknowledge the importance of reviewing qualitative literature and have developed guidelines for conducting reviews on intervention research to supplement the quantitative findings (Hannes, 2011). There is also an argument that lower quality studies can still offer insights; therefore, due to the small number of available studies it was decided that all identified studies would be included in this review (Carroll, Booth & Lloyd-Jones, 2012).

Table 3 - Quality Assessment of studies using the CASP qualitative appraisal tool.

	1. DeRoon-Cassini et al. 2013†	2. Elder & Clipp, 1989†	3. Jahn et al. 2012†	4. Kato, 2010*	5. Larick & Graf, 2012	6. Larner, 2013*	7. McCormack & Joseph, 2014	8. Michna, 2013*	9. Nagle, 2014*	10. Nguyen et al. 2013
Clear statement of aims	√	√	√	√	√	√	√	√	√	√
Appropriate methodology	√	√	√	√	√	√	√	√	√	√
Appropriate research design	√	√	X	√	√	√	√	√	√	√
Appropriate recruitment strategy	√	N/A	X	X	√	√	√	X	√	X
Appropriate data collection	√	X	√	√	√	√	√	√	√	√
Appropriate reflexivity	X	N/A	X	X	X	√	X	X	√	√
Ethical issues considered	X	N/A	X	√	X	√	√	√	X	X
Rigorous data analysis	√	X	X	√	√	√	√	√	√	√
Clear statement of findings	√	X	X	√	√	√	√	√	√	√
Research value considered	√	X	√	√	√	√	√	√	√	√

Key: *=thesis, †= mixed methods, √= yes, X = no, N/A = not applicable, CASP=Critical Appraisal Skills Programme

Findings

Quantitative findings from the four mixed-method papers will be briefly summarised to ensure transparency and enable any further links to be made with the qualitative findings. The qualitative findings will then be described based on emergent themes.

Quantitative Findings

The four papers (DeRoon-Cassini et al., 2013; Elder & Clipp, 1989; Jahn et al., 2012; Larick & Graf, 2012) had different aims and used different methodological approaches so the quantitative findings related to PTG will be summarised separately.

DeRoon-Cassini et al. (2013) explored the meaning-making appraisals of veterans who had sustained a spinal cord injury. Four percent of the sample of 79 suffered the injury during military combat; others were mainly as the result of a traffic collision, fall, illness, assault or other accident. The thesis containing the original data, which was excluded from this review (DeRoon-Cassini, 2008), explains how the sample was initially made up of 85 participants, but one participant dropped out and technical difficulties with recording equipment were cited as the reason for excluding five further participants. The interviews included open-ended questions and measures assessing PTSD, depression, psychological well-being and purpose in life. The grounded theory based approach allowed conversion of qualitative findings into quantitative data to explore frequencies and relationships between the themes. Meaning-making themes were identified if they were reported by 50% or more of the sample. This resulted in seven themes with three relating to PTG: 'Positive growth' (n=52, 66.7%) such as appreciating life more, 'Identity integration' (n=42, 53.8%), involving the impact of the injury being integrated into their identity and 'Acceptance of injury' (n=41, 53.3%), involving a sense of becoming reconciled with their situation. Using bivariate correlations, significant positive associations ($p < .05$) were found between 'Positive growth' and 'Identity integration' and also between 'Positive growth' and the measure of purpose in life, which suggests that they felt their life had more meaning (The Purpose in Life scale; Crumbaugh, 1968).

Elder and Clipp (1989) used archived data from previous longitudinal studies. The focus was on the meanings of combat held by veterans in later life and the impact on their psychosocial functioning, emotional health and resilience. The sample consisted of 149 men rated as part of three groups, non-combatants (40%), light combat (30%) and heavy combat (30%). From interviews and literature 13 statements about positive influences of the military and combat experience were developed. Participants were asked to choose three 'most wanted' aspects of their experience. Using Chi square analysis the authors found significant differences between the three groups, frequency of endorsement of the following statements increased with combat severity: 'Learned to cope with anxiety' ($p < .01$), 'Value life more' ($p < .01$), 'Self-discipline' ($p < .05$) and 'Clearer sense of direction' ($p < .05$). Participants also completed a Q-sort in adolescence and in their 40s or 'mid-life'. The Q-sort included seven personality indices; ego resilience, helplessness, goal-orientation, self-inadequacy, submissiveness, consideration of others and social competence, with good reliability (average, $\alpha = 81$). Using the Q-sort data, a repeated measures analysis of variance showed significant changes over time in heavy combat veterans from adolescence to mid-life in goal orientation ($F = 18.43$, $p = .01$) when compared to the other two groups.

The paper by Jahn et al. (2012) explored the impact of combat exposure and PTSD on levels of distress and resilience or 'stress-related growth', in later life following a cancer diagnosis. The paper reports the initial findings of a longitudinal study on cancer survivorship. Interviews with 76 participants were completed at six and 12 months after a diagnosis of an oral-digestive cancer. The interview involved open-ended questions and quantitative measures of PTSD related to combat and cancer, depression and PTG. The qualitative findings were coded using 'an explicit theoretical lens' using the theory behind the BFS (Tomich & Helgeson, 2004) as described earlier. Using t-tests the only significant difference was that those with combat exposure reported higher levels of PTSD related to cancer, compared to those without combat exposure ($t = -2.09$, $p = .04$). They found higher cancer-related growth in combat veterans with PTSD compared to those without PTSD. Those without PTSD and no combat exposure showed lower cancer-related growth. There were also significant differences in the 'Worldview' subscale of the BFS ($F = 4.79$, $p = .01$), involving statements about purpose in life and religious beliefs, and the 'Family relations' subscale ($F = 3.43$, $p = .04$), about feeling closer to family. In addition, post hoc analyses showed that combat veterans with PTSD had significantly higher scores

on the 'Acceptance' subscale ($p < .05$.), involving adjustment to things that cannot be changed, 'Worldview' ($p < .05$), and 'Family relations' ($p < .05$), compared to those without PTSD.

Larick and Graf (2012) investigated the effect of compassionate acts experienced on the battlefield and other positive military experiences. Fifty-nine participants completed an online survey with four open-ended questions, but only 53 of those completed the six point Likert scale question asking them to rank how they felt about their military experience from 'very damaging' to 'very beneficial'. The mean score (M = 4.30, SD = 1.83) suggests that overall participants found their military experience beneficial with 35 (66%) rating their experience positively to some degree. Using t-tests one significant difference ($p < .03$) was found which showed that participants with depression (n=26, 44.1%) rated their military experience as more damaging (M = 3.71, SD = 2.01) than those without depression (M = 4.79, SD = 1.54). However, no validated measure or diagnostic criteria for depression were used, only self-reported information, so it is difficult to assess the accuracy of this finding.

Qualitative Findings - Themes

Thematic analysis has been used to synthesise information within reviews in a wide range of areas. It is a flexible approach enabling identification of major themes in a structured way, to integrate different types of evidence (Dixon-Woods, Agarwal, Jones, Young & Sutton, 2005; Popay et al., 2006; Ring, Ritchie, Mandava & Jepson, 2011). Thematic analysis can be adapted to specific research aims because it is not located within any specific epistemological position (Coolican, 2009). Therefore, it is useful for synthesising findings from different methodological approaches as represented in this review.

An inductive, semantic level analysis was completed on the findings from the included papers. Description and interpretation of themes was led directly by the data and the participants' words (Braun and Clarke, 2006). The researcher extracted all PTG and other growth-related quotations from the included papers. The data were then coded and separated into initial themes, identified mainly by significance and frequency. On further interpretation, over-arching themes were developed which clearly represented the data as a whole.

The findings from the thematic analysis are represented by six overarching themes and six subthemes. Five of the over-arching themes are directly related to the five factors in the PTGI; 'Relating to others' (factor 1), 'New perspectives' (factor 2), 'Personal strength' (factor 3), 'Spiritual change' (factor 4) and 'Appreciation for life' (factor 5); the findings mapped closely onto the areas identified within these factors. The sixth over-arching theme, 'Positives in the past', does not directly relate to the PTGI but reflects growth through the ability to find positives in traumatic past experiences. The themes will be described and illustrated with the use of quotations that represent the themes' core meanings.

Theme One – Relating to Others

The theme of 'Relating to others' is made up of two subthemes, 'Relationships' and 'Compassion and Empathy'.

Relationships

This subtheme was represented in eight of the studies (Elder & Clipp, 1989; Jahn et al., 2012; Kato, 2010; Larick & Graf, 2012; Larner, 2013; McCormack & Joseph, 2014; Michna, 2013; Nagle, 2014). Growth in relationships was described through feeling closer and more connected to others…"My family has evolved big time…. [My combat deployment] has brought me and my family and friends a lot closer" (Larner, 2013, p. 240), and through the ability to be more open or honest through emotional expression, "If you feel like crying, cry. Period. That's all there is to it...For me, what has worked…is openness and honesty" (Larner, 2013, p. 232).

Participants felt more able "to rely on others" (Michna, 2013, p. 52), let others help them, respect others and "see the good in people and appreciate the people close to you" (Jahn et al., 2012, p. 241). There was a suggestion of growth in attitude towards relationships with people from other cultures, even those viewed as the enemy, a sense of becoming less judgmental.

> "I think that my interaction with the local nationals…changed how I perceive people…These people, especially in Afghanistan, are very intelligent people and you cannot judge them based on initial appearances. Over the course of the year, I developed very close relationships with these officials who

I worked to mentor, and I think that they taught me as much (if not more) than I taught them" (Larick & Graf, 2012, p. 231).

Compassion and Empathy

Development of compassion and empathy was evident in six of the studies (Elder & Clipp, 1989; Jahn et al., 2012; Kato, 2010; Larick & Graf, 2012; McCormack & Joseph, 2014; Michna, 2013). Growth was expressed through developing "more compassion…towards people" (Jahn et al., 2012, p. 241) and a "new sense of empathy after seeing the suffering of so many" (Elder & Clipp, 1989, p. 326). Some had a new desire to help others…"What am I doing with my life? ...I wanted to do something with myself and help other people. It's hard seeing all that stuff and not being able to do anything" (Kato, 2010, p. 110) and "after Desert Storm, I find myself caring more about helping people and giving advice. I attributed some of this to some of the horrific scenes I saw" (Michna, 2013, p. 53).

Compassion was developed for others in general and more specifically for those considered to be the enemy…"It brought me closer to the people I hated…and helped me to see past some of my anger" (Larick & Graf, 2012, p. 232), for those seen as being vulnerable or in need…"I have extreme sensitivities to disabled homeless people and children here in the US; I wish I could help them" (Larick & Graf, 2012, p. 232) and for those military personnel still on active duty…"Maybe I have more empathy to the soldiers and airmen and everyone who are out there right now in Afghanistan and Iraq" (Michna, 2013, p. 58).

Theme Two – New Perspectives

The theme of 'New Perspectives' is made up of two subthemes, 'Changed perspective and attitude' and 'New direction'.

Changed Perspective and Attitude

A change in perspective or attitude was represented in eight of the studies (Elder & Clipp, 1989; Jahn et al., 2012; Kato, 2010; Larick & Graf, 2012; Larner, 2013; McCormack & Joseph, 2014; Michna, 2013; Nagle, 2014). Growth through the possibility of new experiences and ideas was expressed through having developed a broader perspective on life, e.g. it "opened my eyes" (Jahn et al., 2012, p. 241), and respondents described a

new attitude to living…"Those experiences, they changed the way I view life. I take it more seriously" (Kato, 2010, p. 110). The ability to see or embrace new possibilities was acknowledged through becoming more culturally aware, "In the military, you work with every single race you can think of, and after seeing that and working with all of these cultures together to strive for a goal, it opened up my perspective on things" (Kato, 2010, p. 109). Also, through reframing the meaning of what constitutes an enemy…"There's a difference between combatant and enemy" (Larner, 2013, p. 207), "At times I hate them, but they're human just like I am…So who am I to try to dehumanize them" (Larner, 2013, p. 208). Others mentioned developing humility: "The word humility comes to mind, only that I am older now and wiser" (McCormack & Joseph, 2014, p. 348).

This change in attitude led some to have a more goal-orientated focus for life, "I really kind of figured out that I knew exactly what I wanted to do with my life" (Nagle, 2014, p. 68). "That to me is when you set a goal for yourself and you achieve that goal. It helps you personally" (Michna, 2013, p. 59). Others became more focused, specifically on education and career goals…"I guess outside of the military, getting a college education, a degree, setting a goal for oneself and meeting those goals" (Michna, 2013, p. 59).

New Direction

New possibilities for some meant finding new direction. This was represented in six of the studies (Elder & Clipp, 1989; Kato, 2010, Larick & Graf, 2012; Larner, 2013; Michna, 2013; Nagle, 2014). For some, the "clearer sense of direction" (Elder & Clipp, p. 330) was possible due to growth through their military experience, it enabled them to gain "job skills" (Elder & Clipp, 1989, p. 324) and "the army gave me a chance to develop in so many ways…it also gave me an education" (Kato, 2010, p. 111). This had provided them with the ability and inspiration to go on and improve themselves in areas possibly not previously considered…"The outcome of the experiences…were part of the inspiration for me to go into a healthcare field" (Larick & Graf, 2012, p. 233). "I do believe that my experiences have changed my total mindset. I am now pursuing a career in social work so that I may continue to give back to my community" (Larick & Graf, 2012, p. 233).

Theme Three – Personal Strength

The theme of 'Personal strength' is made up of two subthemes, 'Strength and courage' and 'Acceptance'.

Strength and Courage

Development of strength and courage was described in eight of the studies (Elder & Clipp, 1989; Jahn et al., 2012; Kato, 2010; Larner, 2013; McCormack & Joseph, 2014; Michna, 2013; Nagle, 2014; Nguyen et al., 2014). After being held captive in a Vietnamese re-education camp, one participant said "It strengthens my character. I felt that I am more courageous and resilient for enduring those hardships. I feel like I can accomplish anything I set myself to" (Nguyen et al., 2014, p. 8). Growth in strength was demonstrated through acknowledgment of an increased ability "to cope with adversity" (Elder & Clipp, 1989, p. 324), feeling they could "pretty much overcome anything" (Michna, 2013, p. 52) and having more courage to "face my problems" (Jahn et al., 2012, p. 241). This was also expressed in determination to achieve and succeed:

> "My wartime decisions taught me that I was capable of a lot. I'm a very strong person. I've been beaten into the ground by war. I learned a lot about myself. Mainly just how strong I am...how much I can endure…how much further I can prosper" (Larner, 2013, p. 225).

This determination appeared to come from increased confidence and it enabled more focus, self-discipline and dedication…"I'm a completely different person than I was before joining the military, more mature, confident, and self-disciplined" (Kato, 2010, p. 111). "I felt confident, and I became aware that I wanted to pursue my degree. So, it made me a lot more focused and serious on that. So, at work that translated to me being more focused" (Nagle, 2014, p. 68).

Growth was enabled by the recognition of improved self-efficacy and self-belief, enabling them to have "greater independence" (Elder & Clipp, 1989, p. 324) and be more self-reliant…"my understanding…is that I didn't need anything like faith to sustain me. I had to look at myself and either make it through or not make it through" (Larner, 2013, p. 181). For some, the strength came from improved self-awareness and understanding, "I've learned a lot about myself" (Nguyen et al., 2014, p. 8). This involved exploring the ways they had changed, "it made me think about it and wonder what had changed. In what ways have I become a

different person…So, it kind of started to make me want to be aware of what had happened" (Nagle, 2014, p. 78),

Another aspect was being more open to experience and confront emotions…

> "I've engaged the hurtful, the heartbreak, and the painful. Whereas most of the time we stray away from those things. We don't want to feel that. [But] you have to go back to it…You have to know it's okay to go back to it" (Larner, 2013, p. 232)

Acceptance

This subtheme was represented in five of the studies (DeRoon-Cassini et al., 2013; Jahn et al., 2012; Larick & Graf, 2012; Michna, 2013; Nagle, 2014). Acceptance was developed for different aspects of life, "You are dealt a hand, and you must play it" (Jahn et al., 2012, p. 241) and "Now I'm accepting of whatever happens" (Jahn et al., 2012, p. 241). For some it was acceptance of change, injury, illness or the situation they now found themselves and how they integrated these changes into their identity. "Well…it's changed me…I'm not the wild crazy guy I used to be…but, that is ok. I like who I am now" (DeRoon-Cassini et al., 2013, p. 188). For others it was acceptance of not being able to change the past or predict the future, "You just never know what's around the corner, I guess" (Michna, 2013, p. 52). There was a development of acceptance of other people's viewpoints, "There's always two sides to a story. There's always two views" (Larner, 2013, p. 231) and an understanding that not everyone will agree, "It's just how it goes, you know. Not everyone's going to agree with you or what you did. I can't let that bother me" (Nagle, 2014, p. 82).

Theme Four – Spiritual change

This was the smallest theme, represented by only one study (Larner, 2013). Growth was shown through development of spiritual awareness and understanding, taking strength and guidance through spiritual belief. "I think it has taken me to a different level…what did change for me was spirituality. Spirituality was different for me going into combat than it was coming out" (Larner, 2013, p. 193). One participant described his "salvation moment" (Larner, 2013, p. 191) when he found religion while in prison and felt that he "recovered from combat through salvation in Christ" (Larner, 2013, p. 228), so he went on to become a chaplain. Another

participant found his “spiritual views have shifted from organized religion of Catholicism into a more personal questioning introspective type situation” (Larner, 2013, p. 214). Some explored the meaning of killing through their religious beliefs, ““Thou shall not kill”, it's a pacifistic approach as opposed to “thou shall not murder”, is about conflict with a competitor. Yeah, that would make more sense” (Larner, 2013, p. 213).

Theme Five – Appreciation for life

Growth was expressed through renewed appreciation and knowing what was important in eight of the studies (DeRoon-Cassini et al., 2013; Elder & Clipp, 1989; Jahn et al., 2012; Kato, 2010; Larick & Graf, 2012; Larner, 2013; McCormack & Joseph, 2014; Nguyen et al., 2014). Some had new appreciation for people and relationships, “I was grateful for my experiences because it made me cherish what I came back to, my father, and my life much more” (Kato, 2010, p. 112). This included appreciation for other veterans, “It’s given me a deep gratitude and increased respect for the brotherhood combat veterans share” (Larick & Graf, 2012, p. 232). They placed greater importance on embracing the day, “It made me realize life is short and every day you should live to the fullest” (Larick & Graf, 2012, p. 232) and trying to “appreciate the moment” (Kato, 2010, p. 109). It seemed increasingly important to not take anything for granted including their home, their freedom and respect for their country, as well as “the little things in life” (Jahn et al., 2012, p. 241; Kato, 2010, p. 110), “even a grain of rice” (Nguyen et al., 2014 p. 8). One participant summed up the sentiment, “I don’t take a lot for granted anymore because I stop and think, I could have died every day when I was in Iraq” (Kato, 2010, p. 110).

Theme Six – Positives in the past

This smaller theme was demonstrated in three of the studies (Elder & Clipp, 1989; Kato, 2010, Larick & Graf, 2012). It represents the way some participants were able to look back and “see the positive in it all” (Kato, 2010, p. 112). They were able to identify positives from their time in the military such as the “brotherhood of all the soldiers” (Larick & Graf, 2012, p. 234). The traumatic events had given them “the chance to live with, serve alongside, and be family with the absolute greatest human beings that are on this planet [who would] live or die for you” (Kato, 2010, p. 112) and this resulted in them making "life-long friends" (Elder & Clipp, 1989, p. 324). Some saw the military as defining their identity, “My overall experience was positive, no matter what happens, or how things turn out, I will never regret anything I’ve done. It’s made me who I am today”

(Kato, 2010, p. 111). Others acknowledged that it had been a rewarding experience and they had made a positive contribution, "I travelled most of the country…and felt like I actually made a difference for the U.S. as well as the Iraqi people" (Larick & Graf, 2012, p. 234).

Discussion

Summary of Findings

This review explored the subjective experience of PTG in military veterans. Six overarching themes and six subthemes were found. Five of the overarching themes and their associated subthemes were related to the five factors of the PTGI (Tedeschi & Calhoun, 1996): 'relating to others', 'new possibilities', 'personal strength', 'spiritual change' and 'appreciation of life'. The sixth theme, 'positives in the past', was not directly related to the PTGI but it demonstrated PTG through being able to positively reframe traumatic experiences retrospectively.

Evidence Available

The search strategy and inclusion criteria identified 10 relevant papers to be reviewed. This is quite a small number, but the search strategy was intentionally broad in nature and hand searching of references was completed, suggesting the pool of research relating to the research question is small. Therefore, there can be a level of confidence that the findings from this review are based on the available evidence.

Support for Previous Research

Themes that emerged from the thematic analysis of the qualitative findings and the small amount of quantitative data from the mixed-method papers support previous research, especially that related to the work of Tedeschi and Calhoun in the development of the PTGI (Tedeschi & Calhoun, 1996). The majority of the themes developed closely support the factors identified in this assessment tool developed nearly 20 years ago. This finding may further validate the use of the PTGI and its use within veteran populations; it suggests that it is still relevant today and demonstrates that the processes involved in PTG have remained seemingly constant over 20 years. The findings also support the work of Tsai and colleagues (2015), one theme identified in this review, 'relating to others', is similar to their finding of social connectedness being associated with higher levels of PTG, and to a lesser extent their finding of religion being key to PTG. Having purpose in life was

also associated with higher PTG, which is similar to the theme of 'appreciation of life' as it relates to having more awareness of what is important.

The themes generated in this review all represent change that a person may have experienced in different aspects of the self and their lives, as a result of trauma. This could be seen to demonstrate the reappraisal and adjustment process theorised by Joseph and Linley (2005), or the 'shattering of world assumptions' described by Larner (2013) as these processes may need to take place to enable growth. Initially, the reaction may involve severe distress due to the discrepancy between previously held assumptions and new experiences which do not fit with those assumptions. The process of growth which is described by one participant as a "never-ending progression" (Michna, 2013, p. 50), involves trying to resolve this discrepancy by changing your sense of self, world view and "adjusting your life" (Michna, 2013, p. 50). The quantitative findings also support the processes of change in growth represented in the themes, with significant findings aligned to valuing life, world view, acceptance and relationships. There were inconsistent associations between PTG, combat exposure and PTSD, as previous research has suggested the presence of these characteristics tends to be associated with higher levels of PTG (Dekel et al., 2011; Dekel et al., 2012; Gallaway et al., 2011; Tsai et al., 2015; Zerach et al., 2013) but this association was not found in all included studies. This may be due to the heterogeneous populations involved.

As mentioned earlier, the theme of spiritual change was identified within the qualitative findings which supports previous research about the role of religion in coping and growth. However, it was the least represented theme as it was only recognised in one of the included papers (Larner, 2013). It is important at this point to acknowledge the different methodological approaches and aims involved in the included papers. The aim and extensive literature review by Larner (2013) guided the interview questions he used and there was a section of questions specifically related to faith and beliefs before and after military service. Therefore, it is difficult to know if this theme would have emerged with less direct questions. In the paper by DeRoon-Cassini et al. (2013), it was reported that participants mainly felt there was no logical or spiritual explanation for their spinal cord injury.

Strengths and Limitations of the Included Studies

Although quality assessment of qualitative research is a contentious issue (Booth, 2001), it was deemed important in this review to gain a detailed understanding of the papers' methodological strengths and weaknesses, in order to justify how the papers address the research question. Overall the quality of the included studies was mainly good, although most lacked detail in at least one or two important areas. However, this does include the paper by Elder and Clipp (1989) which has been acknowledged in this review, as being substantially different to the other included papers due to publication date, methodology and approach. The overall strengths of the included papers were mainly in the clear statement of aims and findings, methodology, research design, data collection and the description of the wider implications.

Especially due to the nature of qualitative research it is concerning that more than half of the papers were lacking sufficient quality in the area of reflexivity. It is important to acknowledge that this could impact on findings and in some cases lead to bias, especially in interviews, if the role of the researcher is not carefully considered. An example of possible bias is the impact of the researcher having had military experience themselves and whether this may have affected the recruitment procedure, the relationship and the participants' willingness to openly answer questions. It was mentioned in one study that some participants only agreed to take part when they knew the researcher was ex-military (Nagle, 2014). However, the researcher not having military experience may also have led to bias. There was also a lack of detail reported on ethical issues which again is concerning, as this is the way researchers demonstrate their appreciation of participant safety and well-being, especially when investigating sensitive topics such as trauma. In some cases, this may have been improved by explicitly describing the formal ethical approval obtained and what safeguards were put in place for participants. Recruitment strategy was another area not well described in a number of the papers; therefore the justification for the sample may be questionable, especially where acquaintances of the research team were recruited.

Other limitations of the included papers are the lack of good quality longitudinal findings and the use of self-reported data, rather than formal assessment and diagnosis of characteristics. Another issue to consider is the use of self-selecting samples. Those who chose to participate were possibly more likely to have experienced PTG or certain aspects of PTG, such as increased compassion and empathy, as they possibly chose to

participate with the aim of helping others. There was very little attention paid to the differences between participants who chose to take part and those who did not.

Strengths and Limitations of the Review

A strength of this review is that it included both journal articles and theses, single and mixed-methodology papers and did not impose restrictions on date of publishing, to include all available information. This robust coverage was also achieved through the use of a clear and comprehensive search strategy, resulting in papers that related well to answer the research question. Inclusion of appropriate papers was discussed with a research supervisor, the quality of the papers was assessed and this was independently checked to ensure accuracy. The analysis and synthesis of the information was a complex, data-driven process which was completed in a systematic way, while still ensuring the meaning of the participants' words remained at the centre of the results.

The use of thematic analysis in this review may be seen as a weakness as although it is a widely used and reputable approach, it can be criticised for its lack of transparency in the analytic process and its limited ability to explore higher order meanings or develop new knowledge (Dixon-Woods et al., 2005; Popay et al., 2006). With more resources another appropriate approach may have been the newer thematic synthesis (Thomas & Harden, 2008). Other, meta-type approaches were inappropriate due to the different methodologies used within the included studies. Thematic synthesis tends to be more directed towards papers evaluating the need for interventions and their effectiveness (Barnett-Page & Thomas, 2009). However, the inductive thematic analysis process used in this review has been clearly described and is well supported by the use of direct quotations to ensure there is transparency in the way the themes were developed. It has resulted in interesting and new findings in relation to an area previously lacking in any synthesis of qualitative information.

The heterogeneity of the included papers cannot be over stated, as although they all contributed to answering the research question they differed substantially. The few similarities between the included papers were related to most being cross-sectional, conducted in the US, involving mainly male participants, mostly using interviews for data collection and mostly being published within a four year period. As there was a limited

amount of research available in this area and this review presents a new opportunity to highlight this, it meant that the inclusion criteria were quite broad in order to ensure coverage of the few available papers. This approach led to a large diversity in the type of papers included and may suggest caution in interpreting the findings as representative of veteran populations, especially outside of the US and Australia. However the opposite may also be true, as the findings do demonstrate a number of common themes across the populations and qualitative research is not generally designed to be used for generalisation to wider populations.

Some of the differences will be discussed with suggestions as to how they may have impacted on the findings. The aims of the included papers were varied and therefore there were also large differences in the methodological approaches, sample sizes and participant populations. While all the participants were veterans, they had all had very different experiences, especially relating to the conflicts they served in and the traumatic events that may have impacted on their psychological health. This review was intended to explore veterans' subjective experiences of PTG after military service but it is difficult to suggest that the PTG described by all the participants was as a result of their military experience. A number of papers explored PTG after a specific event, such as being diagnosed with an oral-digestive cancer (Jahn et al., 2012) or sustaining a spinal cord injury (DeRoon-Cassini et al., 2013), or they related to a specific experience such as, being held captive in a re-education camp (Nguyen et al., 2014), returning to non-military employment after deployment as a reservist (Nagle, 2014), acts of battlefield compassion (Larick & Graf, 2012), or returning to civilian life after the military (Kato, 2010). As the studies tended to have a different focus, this also meant the questions asked within the interviews and surveys were different. Most of the papers detailed the questions or the topic areas covered in the interviews and as suggested earlier, the finding about spirituality is related to specific questions asked by Larner (2013). This may suggest participants were discussing their experience of PTG in relation to very different experiences, not necessarily directly related to their military service.

The differences in sample population were also numerous and may have impacted on the way participants answered questions, such as the ethnicity of participants or their age, which ranged from 23 to 75. Although not explicitly stated, it is assumed participants' length of military service, length of time out of the military and length of time since the traumatic experiences would vary considerably. All these factors may impact on a participant's viewpoint related to past experiences and trauma, as longer time may have a healing effect

although this does not seem to be the case in the studies which included older participants. Another important factor that has only been addressed in one paper (McCormack & Joseph, 2014), is whether the participants had previously received any support or therapeutic intervention, either generally, or specifically related to traumatic experiences. This may impact their view of events, themselves and possibly how they cope as a result. If a participant is more familiar with the concept of PTG, they may be more open to it and more knowledgeable about the ways in which growth may manifest in the way they think, feel and behave. However, as this information is unavailable it is difficult to know to what extent this may have impacted on the findings.

The different methodologies used in the included papers raises a contentious issue as there has been debate about whether the findings from these different qualitative approaches should be combined (Barbour, 1998; Sandelowski, Docherty & Emden, 1997). However, as the concept of systematically reviewing qualitative research has been recognised by The Cochrane Collaboration (Hannes, 2011), this is a strong endorsement that this approach is a valid method, assuming the qualitative information is treated sympathetically. The inclusion of the mixed-method papers in this review may have led to them being slightly less well represented within the qualitative themes due to the need to report both quantitative and qualitative data, therefore ultimately containing less qualitative data than other papers. However, there may also be different representation of papers due to the length of interviews conducted varying from 20 minutes to two hours, and one study (Larick & Graf, 2012) involved participants writing text in an online survey; so the depth of information collected and therefore reported would have varied.

Conclusions

This review supports the research that shows veterans can experience PTG and it was found that this may even occur after further traumatic events outside of the military. The subjective experiences expressed by the participants fitted well with the factors included in the PTGI and also highlighted the role of finding positives in previous negative experiences. These findings can have important implications on clinical practice, but should be interpreted with caution due to the limitations within the included papers and in the review process.

Future Research and Clinical Implications

This review found six themes that were described through synthesis of the qualitative information within the 10 included studies. Five of those themes were associated with the PTGI (Tedeschi & Calhoun, 1996): 'relating to others', 'new possibilities', 'personal strength', 'spiritual change' and 'appreciation of life'. The sixth theme, 'positives in the past', describes growth through being able to look back at traumatic events and see the positives.

Further high quality research is required to explore the experience of PTG in less specific veteran populations, to gain a more representative picture and also with veterans outside of the US and Australia. The research should consider if participants have undertaken any form of psychological therapy and how this may have affected their experience or their description of it. There is a need for more longitudinal research to explore how PTG is developed and maintained over time. Also it is important to understand how PTG is experienced in more diverse populations of veterans, such as female veterans, who may have different views.

This review has unintentionally provided support for the role of the PTGI within services who provide support for veteran populations mainly in the US and Australia. It also helps to guide clinicians' thinking with regards to supporting veterans, by identifying the areas of their lives and their self-perception that may be most open to change and growth after trauma. As PTG is seen as a type of long-term coping strategy and research has found links between certain forms of coping and increased PTG (Dekel et al., 2011; Tait, 2013; Trevino et al., 2012), it may be beneficial for clinicians to consider how military veterans are already coping with their difficulties. An intervention could then be targeted towards developing coping that may facilitate growth.

> "Post-trauma growth is every therapist's goal: to come alongside those who have been to hell and back and help them to move forward, not by burying or avoiding reminders of the horrors of war, but through reappraising their experiences more constructively" (Larner, 2013, p. 87).

Supporting veterans to develop more positive ways of coping has been is considered to be beneficial as programmes aimed at supporting the PTG process are being developed (Campbell, Picket & Yoash-Gantz,

2010; Tedeschi & McNally, 2011), Tedeschi and Calhoun (1995) have reported how this may also help to strengthen coping in the long-term.

References

Baillie, S.E., Sellwood, W. & Wisely, J.A. (2014). Post-traumatic growth in adults following a burn injury. *Burns*, 40, 1089-1096. doi:10.1016/j.burns.2014.04.007

Barbour, R (1998). Mixing methods: quality assurance or qualitative quagmire? *Qualitative Health Research*, 8, 352-361.

Barnett-Page, E. & Thomas, J. (2009). Methods for the synthesis of qualitative research: A critical review. *BMC Medical Research Methodology*, 9, 59. doi:10.1186/1471-2288-9-59

BBC News. (2015). Veterans' mental health: Referrals rise by 26%. Retrieved April 6, 2015, from http://www.bbc.co.uk/news/uk-32126052

Benetato, B.B. (2011). Posttraumatic growth among Operation Enduring Freedom and Operation Iraqi Freedom amputees. *Journal of Nursing Scholarship*, 43, 412-420. doi:10.1111/j.1547-5069.2011.01421.x

Booth, A. (2001, May). *Cochrane or cock-eyed? How should we conduct systematic reviews of qualitative research?* Paper presented at the Qualitative Evidence-based Practice Conference, Taking a Critical Stance, Coventry. Retrieved April 11, 2015, from http://www.leeds.ac.uk/educol/documents/00001724.htm

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. doi: 10.1191/1478088706qp063oa

Campbell, T.A., Picket, T.C. & Yoash-Gantz, R.E. (2010). Psychological rehabilitation for us veterans. In E. Martz's (Ed.) *Trauma Rehabilitation after War and Conflict*. New York, NY: Springer. doi:10.1007/978-l-4419-5722-1

Cann, A., Calhoun, L.G., Tedeschi, R.G., Taku, K., Vishnevsky, T., Triplett, K.N. & Danhauer, S.C. (2010). A short form of the Posttraumatic Growth Inventory. *Anxiety, Stress, and Coping*, 23, 127-137. doi: 10.1080/10615800903094273

Carroll, C., Booth, A. & Lloyd-Jones, M. (2012). Should we exclude inadequately reported studies from qualitative systematic reviews? An evaluation of sensitivity analyses in two case study reviews. *Qualitative Health Research*, 22, 1425-1434. doi: 10.1177/1049732312452937

Coolican, H. (2009). *Research methods and statistics in psych*ology. (5th ed.). London: Hodder Education.

Critical Appraisal Skills Programme (CASP). (2013). 10 questions to help you make sense of qualitative research. Retrieved February 12, 2015, from http://media.wix.com/ugd/dded87_29c5b002d99342f788c6ac670e49f274.pdf

Crumbaugh, J.C. (1968). Cross-validation of Purpose-in-Life test based on Frankl's concepts. *Journal of Individual Psychology*, 24, 74–81.

Dekel, S., Mandl, C. & Solomon, Z. (2011). Shared and unique predictors of post-traumatic growth and distress. *Journal of Clinical Psychology*, 67, 241-252. doi: 10.1002/jclp.20747

Dekel, S., Ein-Dor, T. & Solomon, Z. (2012). Posttraumatic growth and posttraumatic distress: A longitudinal study. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4, 94-101. doi: 10.1037/a0021865

De la Fontaine, N. (2013). Posttraumatic stress disorder, social support and the role of ideology as evident in the war narratives of Israeli soldiers. (Doctoral dissertation). Retrieved from ProQuest (3579778).

DeRoon-Cassini, T. (2008). The influence of meaning making on distress and well-being following spinal cord injury: A cross-sectional examination with military veterans. (Doctoral dissertation). Retrieved from ProQuest (3326755).

DeRoon-Cassini, T.A., De St. Aubin, E., Valvano, A.K., Hastings, J. & Brasel. K.J. (2013). Meaning-making appraisals relevant to adjustment for veterans with spinal cord injury. *Psychological Services*, 10, 186-193. doi: 10.1037/a0030963

Dixon-Woods, M., Agarwal, S., Jones, D., Young, B. & Sutton, A. (2005). Synthesising qualitative and quantitative evidence: A review of possible methods. *Journal of Health Services Research & Policy*, 10, 45-53.

Eichorn, D.H., Clausen, J.A., Haan, N., Honzik, M.P. & Mussen, P.H. (Eds.). (1981). *Present and Past in Middle Life.* New York: Academic Press.

Elder, H.G. & Clipp, E.C. (1989). Combat Experience and Emotional Health: Impairment and Resilience in Later Life. *Journal of Personality*, 57, 311-341.

Frankl, V.E. (1963). *Man's search for meaning: An introduction to logotherapy*. New York, NY: Simon & Schuster.

Gallaway, M.S., Millikan, A.M. & Bell, M.R. (2011). The association between deployment-related posttraumatic growth among U.S. army soldiers and negative behavioral health conditions. *Journal of Clinical Psychology*, 67, 1151-1160. doi: 10.1002/jclp.20837

Hannes, K. (2011). Chapter 4: Critical appraisal of qualitative research. In Noyes, J., Booth, A., Hannes, K., Harden, A., Harris, J., Lewin, S. & Lockwood, C, (editors), *Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions*. Version 1 (updated August 2011). Cochrane Collaboration Qualitative Methods Group, 2011. Retrieved June 25, 2015, from http://cqrmg.cochrane.org/supplemental-handbook-guidance

Hefferon, K., Grealy, M. & Mutrie, N. (2009). Post-traumatic growth and life threatening physical illness: A systematic review of the qualitative literature. *British Journal of Health Psychology*, 14, 343-378. doi: 10.1348/135910708X332936

Jahn, A.L., Herman, L., Schuster, J., Naik, A. & Moye, J. (2012). Distress and resilience after cancer in veterans. *Research in Human Development*, 9, 229-247. doi: 10.1080/15427609.2012.705555

Joseph, S. (2009). Growth following adversity: Positive psychological perspectives on posttraumatic stress. *Psychological Topics*, 18, 335-344.

Joseph, S. & Linley, P.A. (2005). Positive adjustment to threatening events: An organismic valuing theory of growth through adversity. *Review of General Psychology*, *9*, 262-280. doi: 10.1037/1089-2680.9.3.262

Joseph, S. & Linley, P.A. (2006). Growth following adversity: Theoretical perspectives and implications for clinical practice. *Clinical Psychology Review*, 26, 1041-1053. doi:10.1016/j.cpr.2005.12.006

Joseph, S., Murphy, D. & Regel, S. (2012). An affective–cognitive processing model of post-traumatic growth. *Clinical Psychology and Psychotherapy*, 19, 316-325. doi: 10.1002/cpp.1798

Kato, L.N. (2010). The psychological adjustment of veterans returning from Afghanistan and Iraq. (Doctoral dissertation). Retrieved from ProQuest (3426110).

Kelim, B. & Ehlers, A. (2009). Evidence for a curvilinear relationship between posttraumatic growth and posttrauma depression and PTSD in assault survivors. *Journal of Traumatic Stress*, 22, 45-52. doi: 10.1002/jts.20378

Krutiš, J., Mareš, J. & Ježek, S. (2011). Posttraumatický rozvoj u vojáků ačr po návratu ze zahraniční mise. / Post-traumatic growth in soldiers of the army of the Czech Republic after return from foreign mission. *Československá Psychologie*, 55, 245-346.

Larick, J.G. & Graf, N.M. (2012). Battlefield compassion and posttraumatic growth in combat servicepersons. *Journal of Social Work in Disability & Rehabilitation*, 11, 219-239. doi: 10.1080/1536710X.2012.730824

Larner, B. (2013). A grounded theory study of meaning-making coping and growth in combat veterans. (Doctoral dissertation). Retrieved from ProQuest (3566020).

Larner, B. & Blow, A. (2011). A model of meaning-making coping and growth in combat veterans. *Review of General Psychology*, 15, 187-197. doi: 10.1037/a0024810

Linley, P.A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17, 11–21. doi: 10.1023/B:JOTS.0000014671.27856.7e

Maguen, S., Vogt, D.S., King, L.A., King, D.W. & Litz, B.T. (2006). Posttraumatic growth among Gulf War I veterans: The predictive role of deployment-related experiences and background characteristics. *Journal of Loss and Trauma*, 11, 373-388. doi: 10.1080/15325020600672004

McCormack, L. & Joseph, S. (2014). Psychological Growth in Aging Vietnam Veterans: Redefining Shame and Betrayal. *Journal of Humanistic Psychology*, 54, 336-355. doi: 10.1177/0022167813501393

McKee, E. (2009). Posttraumatic growth in OEF/OIF veterans: Implications for treatment. (Doctoral dissertation). Retrieved from ProQuest (3385196).

Michna, J.M. (2013). A qualitative exploration of the corrective emotional experience in posttraumatic growth. (Doctoral dissertation). Retrieved from ProQuest (3588613).

Moher, D., Liberati, A., Tetzlaff, J. & Altman, D.G. (2010). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *International Journal of Surgery*, 8, 336-341. doi: 10.1016/j.ijsu.2010.02.007

Nagle, T.B. (2014). The lived experience of workplace reintegration for reserve component servicemembers following an extended period of combat deployment. (Doctoral dissertation). Retrieved from ProQuest (3614807).

Nguyen, C.M., Liu, W.M., Phan, T.T., Pittsinger, R., Casper, D. & Alt, M. (2013). Vietnamese military men's perceptions of the long-term psychological effects of reeducation camps. *Psychology of Men & Masculinity*. doi: 10.1037/a0034731.

Ogden, H., Harris, J.I., Erbes, C.R., Engdahl, B.E., Olson, R.H.A., Winskowski, A M. & McMahill, J. (2011). Religious functioning and trauma outcomes among combat veterans. *Counselling and Spirituality*, 30, 71-90.

Pietrzak, R.H., Goldstein, M.B., Malley., J.C, Rivers, A.J., Johnson, D.C., Morgan, C.A. et al. (2010). Posttraumatic growth in veterans of operations enduring freedom and Iraqi freedom. *Journal of Affective Disorders, 126,* 230-235. doi:10.1016/j.jad.2010.03.02

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K. & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews: a product from the ESRC methods programme*. Lancaster: Narrative Synthesis in Systematic Reviews, Lancaster University.

Ring, N., Ritchie, K., Mandava, L. & Jepson. R. (2011). A guide to synthesising qualitative research for researchers undertaking health technology assessments and systematic reviews. NHS Quality Improvement Scotland (NHS QIS). Retrieved February 21, 2015, from http://www.nhshealthquality.org/nhsqis/8837.html

Sandelowski, M., Docherty, S. & Emden, C. (1997). Focus on qualitative methods. Qualitative meta-synthesis: Issues and techniques. *Research in Nursing and Health*, 20, 365-371.

Steger, M.F., Owens, G.P. & Park, C.L. (2015). Violations of war: Testing the meaning-making model among Vietnam veterans. *Journal of Clinical Psychology*, 71, 105-116. doi: 10.1002/jclp.22121

Stephenson, W. (1935). Technique of factor analysis. *Nature*, 136, 297.

Syme, M.L., Delaney, E., Wachen, J.S., Gosian, J. & Moye, J. (2013) Sexual self-esteem and psychosocial functioning in military veterans after cancer. *Journal of Psychosocial Oncology*, 31, 1-12. doi: 10.1080/07347332.2012.741096

Tait, R.N. (2013). The role of prayer coping and disclosure attitudes in posttraumatic outcomes among Iraq and Afghanistan veterans. (Doctoral dissertation). Retrieved from ProQuest (3605004).

Tedeschi, R.G. (1999). Violence transformed: Posttraumatic growth in survivors and their societies. *Aggression and Violent Behavior*, 4, 319-341. doi: 10.1016/S1359-1789(98)00005-6

Tedeschi, R.G. & Calhoun, L.G. (1995). *Trauma and Transformation: Growing In the Aftermath of Suffering*. Newbury Park, CA: Sage Publications.

Tedeschi, R.G. & Calhoun, L.G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9, 455-471. doi: 10.1007/BF02103658

Tedeschi, R.G., & Calhoun, L.G. (2004). Post-traumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*, 15, 1-18. doi: 10.1207/s15327965pli1501_01

Tedeschi, R.G. & McNally, R.J. (2011). Can we facilitate posttraumatic growth in combat veterans? *American Psychologist*, 66, 19-24. doi: 10.1037/a0021896

Thomas, J. & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8, 45. doi:10.1186/1471-2288-8-45

Tomich, P.L. & Helgeson, V.S. (2004). Is finding something good in the bad always good? Benefit finding among women with breast cancer. *Health Psychology*, *23*, 16–23. doi: 10.1037/0278-6133.23.1.16

Trevino, K.M., Archambault, E., Schuster, J., Richardson, P. & Moye, J. (2012). Religious coping and psychological distress in military veteran cancer survivors. *Journal of Religion and Health*, 51, 87-98. doi: 10.1007/s10943-011-9526-0

Tsai, J., El-Gabalawy, R., Sledge, W.H., Southwick, S.M. & Pietrzak, R.H. (2015). Post-traumatic growth among veterans in the USA: results from the National Health and Resilience in Veterans Study. *Psychological Medicine*, 45, 165-179. doi: 10.1017/S0033291714001202

Woike, B.A. & Matic, D. (2004). Cognitive complexity in response to traumatic experiences. *Journal of Personality*, *72*(3), 633-658. doi: 10.1111/j.0022-3506.2004.00275.x

Zerach, G., Solomon, Z., Cohen, A. & Ein-Dor, T. (2013). PTSD, resilience and posttraumatic growth among ex-prisoners of war and combat veterans. *Israel Journal of Psychiatry and Related Sciences*, 50, 91-98.

Chapter 2 - Empirical Paper

How do Male Military Veterans Cope with Psychological Difficulties: A Q Methodological Study.[1]

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[1]To be submitted to: *Qualitative Research in Psychology* (No specified word count)

1. Abstract

There is a growing awareness of the mental health difficulties experienced by military veterans, but research has involved mostly quantitative methodologies, been completed in the United States and focused on Post-traumatic stress disorder. This study aimed to begin filling in the gap of how male, British veterans, experience and cope with psychological difficulties from their own subjective viewpoint. Q methodology was used as the structured, practical task format was considered more appropriate for this sample and it enabled the collection of a wider range of perspectives. Thirty participants completed the Q-sort. By-person factor analysis identified three factors from their responses that represented three distinctive viewpoints about coping: 'Healthily active, with positive military identity', 'Unhealthily avoidant, with negative military identity' and 'Ambivalently striving, without clear military identity'. Clinical implications and recommendations for future research are discussed within the context of the study strengths and limitations.

Key words: Military, Veterans, Coping, Psychological difficulties, Mental Health, Q methodology.

2. Introduction

There is a growing awareness of the negative impact military service could have on someone's mental health (Mental Health Foundation, 2013). It is estimated that approximately 4.5 million veterans live in the UK (NHS Choices, 2014) and the need for psychological help for British veterans is great. Approximately "one person in every 1,000 regular service personnel is discharged annually for mental health reasons" (NHS Choices, 2011), a high proportion of veterans have difficulties transitioning back into civilian life (Morin, 2011) and many do not present to mainstream mental health services until 13 years on average, after leaving the military (BBC News, 2015).

Mostly, research concerning veterans mental health has focused on those veterans who have post-traumatic stress disorder (PTSD) and has neglected more common difficulties such as depression, anxiety, anger and grief (Fossey, 2010). These difficulties can lead to further problems such as substance misuse, which may be used as a way of coping. How a person copes with psychological difficulties can significantly impact their everyday life and those around them (Fossey, 2010).

Coping refers to the responses people use to deal with psychological distress in an attempt to reduce negative feelings (Houston, 1987). Lazarus and Folkman's (1984) theory divides coping into two functions; problem-focused coping and emotion-focused coping. Problem-focused coping involves strategies directed at the environment, such as changing resources, reducing barriers, or strategies directed towards the self, such as finding gratification in different ways or developing skills. Emotion-focused coping involves strategies aimed at reducing distress, such as avoidance, selective attention, or it involves strategies aimed at increasing the distress such as, self-blame or behavioural strategies such as exercising.

2.1. Quantitative Coping Research

Research on veterans coping with psychological difficulties has mainly been quantitative, focused on PTSD and conducted in the United States (US). Recent quantitative research into coping in PTSD, highlights coping strategies that veterans use such as: cannabis (Bonn-Miller, Vujanovic & Drescher, 2011), binge drinking (Cucciare, Darrow & Weingardt, 2011), emotional avoidance or emotional expression (Hassija et al., 2012), avoidant coping such as withdrawal, or active coping such as acceptance (Boden et al., 2012; Galor & Hentschel, 2012), meaning-focused coping and making use of social support (Wood et al., 2012) and worry, self-punishment, social control and behavioural distraction (Pietrzak, Harpaz-Rotem & Southwick, 2011).

In quantitative non-PTSD specific literature, other coping strategies identified are; religion in veteran survivors of cancer (Trevino et al., 2012); cognitive avoidance, in veterans with chronic fatigue syndrome (Fiedler et al., 2000); hope and proactive coping, in veterans with visual impairment (Jackson et al., 1998); and problem solving, in elderly veterans who had a limb amputation (Desmond, 2007; Desmond & MacLachlan, 2006).

2.2. Qualitative Coping Research

There is little qualitative research investigating veterans' coping strategies, and again, most has been conducted in the US. Brenner et al. (2008) found combat exposure affects what coping strategies American veterans use and that they may learn to adapt their strategies when they transition into civilian life. For example, initially using substances to avoid upsetting feelings and forget, then understanding the negative consequences of trying to forget and turning to social support instead. Hagerty et al. (2011) found that combat

wounded veterans described a range of coping responses that changed over time. At first more negative, involving anger and alcohol, mostly focused on physical recovery. Later they were more focused on developing strategies to control their emotions and redirect their thinking. Other themes relevant to veterans coping with recovery, were finding meaning in what had happened (Larner & Blow, 2011) and sharing experiences and war stories with other veterans (Wilson et al., 2009). One British qualitative study looked at coping in Second World War veterans by exploring their experiences of social support related to coherence of war memories (Burnell, Coleman & Hunt, 2010). This study highlighted two main strategies; avoidance, using social support to protect against distressing war memories, and processing, using social support to actively remember and associate meaning to the memories, increasing their sense of belonging.

2.3. Why Coping is Important

Coping mechanisms employed to deal with psychological distress can have a great impact on recovery, independent functioning and quality of life. As demonstrated in the systematic review by Ferguson (2015), veterans can experience Post-traumatic growth (PTG) after military service, which involves positive personal change. Importantly PTG may be positively related to such coping strategies as positive religious participation (Tait, 2013), 'dispositional optimism' (Feder et al., 2008) and active coping strategies (Dekel, Mandl & Solomon, 2011). However, suicidal ideation may have a negative relationship with PTG (Gallaway, Milikan & Bell, 2011). Those veterans who have higher resilience tend to exhibit lower PTG as they have the strength to cope in the first place and therefore, do not have the same potential for positive growth (Zerach et al., 2013). There are programmes being developed that are designed to facilitate the PTG process in veterans which involve encouraging enhanced use of positive coping strategies (Tedeschi & McNally, 2011; Campbell, Picket, & Yoash-Gantz, 2010). It is important to facilitate positive growth processes as long lasting PTG could aid further healthier coping (Tedeschi & Calhoun, 1995). Therefore, having an awareness of how a person copes may inform the best way to aid them in their recovery.

Although US and UK armed forces frequently fight alongside each other, there remain differences in military structure, culture, experiences and veteran support systems, making it difficult to compare across the different forces. The aim of this research is to gain an understanding of the experience of coping and the ways British male veterans cope with psychological difficulties, from their own perspective. The expectation is that

participants will endorse a range of perspectives and the findings may be used to inform therapeutic intervention within this population.

3. Q Methodology

As this kind of research has not been conducted with British veterans before, it was decided a methodology that captured a greater number of subjective viewpoints would be the most useful way to contribute to this field. Q methodology (Q) was selected as it "provides a systematic and rigorously quantitative means for examining human subjectivity" (McKeown & Thomas, 1988, p.7). Q was originated by Stephenson (1935) and is based on social constructionist principles as it explores the different ways any 'object' can be constructed (Willig & Stainton-Rogers, 2008). It is a unique hybrid of quantitative and qualitative methods, with the advantage of being able to capture a much richer and holistic insight into participants' viewpoints, without the researcher having implied a pre-conceived frame of reference. Therefore, the respondent is not constrained by predefined categories in the same way as more common methods such as Likert scales.

Q was appropriate for a number of reasons. Q involves a structured approach to gaining viewpoints from participants and it was felt this may resonate with the structured lifestyle veterans will have experienced for a period of their lives and may be reassuring. Also, due to the possibility of stigma associated with mental health problems in the military (Iversen, 2011), it may be more challenging for veterans to talk openly about their coping strategies. Q represents a less-direct, less-threatening approach to gaining an insight into individual viewpoints than an interview. Due to the procedure of Q, the main task involves ranking statements about coping rather than answering personal questions about their own experiences. This may help them feel more at ease and able to express their opinions in this way. Another advantage of Q is that it is more like the real world, participants consider a range of issues in relation to each other and prioritise what is more important to them, rather than considering and responding to each issue individually, as in an interview or survey.

4. Method

4.1. Ethical Approval

This research was approved by the Doctorate of Clinical Psychology research committee at University of Liverpool and by the NHS local Research Ethics Committee in July 2014.

4.2. Stages of Q Methodology

Q involves a two stage method followed by data analysis. Stage one involves developing the Q-set, the Q-set statements are derived from interviews with people who have an insight into the topic and from relevant literature. Stage two involves conducting the Q-sort, the Q-set is printed onto separate cards and participants decide how much they agree or disagree with each statement by ranking them on a predetermined matrix in relation to each other. Lastly data analysis, by-person factor analysis is used to analyse statement rankings in an attempt to group similar viewpoints together.

4.3. Stage 1 - Developing the Q-set

It is important that statements developed for the Q-set use similar language to those participants completing the Q-sort (McKeown & Thomas, 1988). This is especially important within a military context due to the distinctive language and terminology used. To achieve this, statements were developed through qualitative interviews with veterans and military personal who support others to transition out from military service, and from empirical papers and textbooks.

4.3.1. Stage 1 – Participants

Participants included nine veterans; four who had accessed the psychology service, a staff member from the service, a veteran's charity manager and three who still have roles in the military, supporting the needs of service personnel transitioning out of the service and veterans. The remaining three were serving personnel who support transitioning of those with injuries. The participants were all male, aged between 38 and 66, all identified themselves as white British or white English, except one who identified himself as black British, and 11 were employed. Their military service was mainly in the Army, with two participants in the Royal Navy, one in the Royal Air Force and one in the Royal Marines. Military ranks ranged from Private or equivalent, to Lieutenant Commander and Lieutenant Colonel. Length of service ranged from four to 50 years.

All participants had been deployed and 11 had experienced combat. Time since leaving the service ranged from four to 29 years.

4.3.2. Stage 1 - Procedure

Twelve semi-structured, face-to-face, interviews were conducted. Participants were given the information sheet. After any questions had been answered and if they agreed to take part, they signed two consent forms; one was retained by the participant and one by the researcher. Eight participants consented to the interviews being digitally recorded. Four declined recording, due to military regulation, so the researcher made detailed notes. The interview schedule involved questions relating to how the participants thought veterans cope with psychological difficulties. The questions and prompts were kept broad in order to give participants space for their subjective viewpoint. The interviews lasted between 28 and 75 minutes and participants were given a debrief sheet after completion of the interview.

Two interviews were transcribed verbatim by the researcher and notes from the four interviews not recorded, were typed up. Six interviews were transcribed verbatim by a University of Liverpool approved transcriber, within a contract of confidentiality, using password-protected files. The researcher then read and re-read the transcripts and extracted statements line by line, using the participants own words wherever possible. The statements derived from the interviews and relevant literature were combined and produced 1880 statements in total. The research team then completed a five-stage process to identify the most representative statements that illustrated the most relevant themes of coping expressed. During this five-stage process, demonstrated in Figure 1 (p. 55), stages one to three were completed by the researcher and stages three and four were completed collaboratively by the research team of four. Statements were removed for various reasons, as illustrated in Figure 1. This process resulted in 54 statements remaining (Appendix 1), fitting with the guidance from Watts and Stenner (2012) of having 40 to 80 statements. Some of the final statements were reworded or rephrased slightly, to simplify them and ensure clarity. The final statements were developed to finish the sentence "when faced with psychological difficulties I cope by…" as this kept the research question at the forefront of the participants' minds when completing the Q-sort. The final Q-set was reviewed by the veteran staff member from the interview stage, as his role meant he had affinity with the veteran population, without being eligible to take part. He suggested no changes to the statements selected or the wording. The

final Q-set was then trialled with five participants; no changes were suggested, so their data were then included in the main results of study.

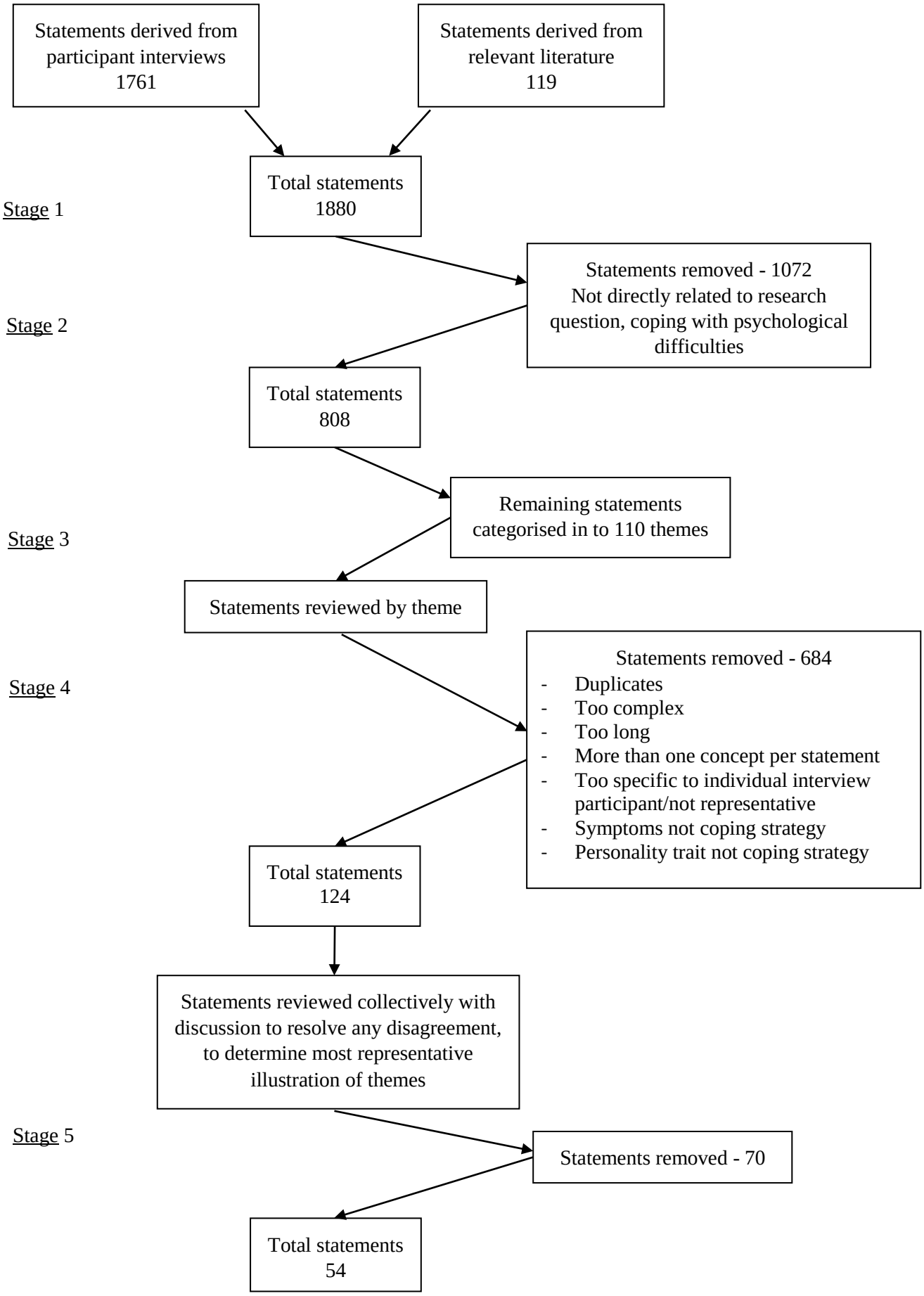


Figure 1 - Flow diagram illustrating statement selection process

4.4. Stage 2 – Conducting the Q-sort

4.4.1. Stage 2 - Participants

Participants were recruited from an NHS psychological therapy service in the North West of England, which works specifically with veterans. The sample consisted of 30 participants, which is adequate to ensure the factor structure of the results will be stable (McNaught & Howard, 2001; Brown, 1980). A non-probability, purposive sampling technique was employed, as statistical generalisability is not an aim of Q and this was intended to obtain a diverse range of participant views. Inclusion criteria consisted of; male veterans of the British armed forces, aged 18 or over, currently being assessed, undertaking treatment, or having completed treatment. With the ability to independently attend an appropriate venue in their local area and have the intellectual capacity to follow instructions to complete the Q-sort. No criteria about English language were needed, as it is a requirement of the British armed forces that all personnel can speak English. Only male participants were included as the proportion of female veterans accessing the psychology service is low and research suggests women may have different experiences in the military, and after leaving, so would be difficult to compare (See Gutierrez et al., 2013, for a review of the literature on gender differences). Exclusion criteria were: veterans who had been assessed by the psychology service as presenting with some form of risk to the researcher. Participants were initially contacted by a psychology service clinician or administrator with information about the research. They were given the information sheet, by hand or via email, then asked for their consent to be contacted by the researcher. The researcher contacted participants to discuss the information sheet and answer any questions. If participants consented to meeting with the researcher, a suitable date and venue were arranged in a convenient area for the participant.

4.4.2. Stage 2 - Demographics

The 30 participants had an average age of 44.8 (24 to 71), 28 were white British in ethnicity, 23 had a wife or partner and 17 had dependent children. One participant was in the assessment stage before commencing treatment, 16 were in treatment and 13 had completed treatment. Twenty four had served in the British Army, four in the Royal Air Force and two in the Royal Navy, 27 had been operationally deployed. See Table 1, for further demographic information for those who loaded significantly on each factor.

Table 1 – Demographic information for participants who significantly loaded on each factor

	Demographics (Participants)	Factor 1 (13)	Factor 2 (11)	Factor 3 (15)
Participant Characteristics	Ave. age (age range)	50.7 (37-71)	44.1 (24-61)	43.4 (27-61)
	No. with Wife/Partner	11	8	11
	No. with Dependent children	3	4	8
	No. living with others	11	8	8
	No. unemployed	4	4	9
	No. alcohol above recommended limits	1	5	0
	No. alcohol within recommended limits	3	3	4
	No. previous police contact	3	4	3
	No. long term health conditions	7	7	11
	No. mobility fair or worse	8	6	9
	No. self-referral	3	5	6
Therapy information	No. PTSD primary referred problem	5	5	9
	No. previous therapy	4	8	8
	No. currently in therapy	7	8	8
	No. discharged from therapy	6	3	6
Clinical measures	Ave. PHQ9 score (range)	10.8 (0-20)	12.5 (3-21)	13.3 (2-21)
	No. reached caseness on PHQ9	6	7	10
	Ave. GAD7 score (range)	9.3 (0-19)	11.4 (6-19)	11.7 (0-20)
	No. reached caseness on GAD7	8	10	10
	Ave. WSAS score (range)	12.5 (0-29)	17.2 (7-29)	16.6 (1-31)
	No. with mild or more impairment	6	9	11
	Ave. IESR score (range)	34.3 (0-67)	40.6 (0-76)	40.9 (3-66)
	No. reached caseness on IESR	8	5	13
Military information	No. rank private/equivalent on discharge	6	8	11
	Ave. length of service	14.8	8.9	8.2
	Ave. length of time since discharge	16.6	17.5	16.4

* Ave.= mean average of participants, No.=number of participants

4.4.3. Stage 2 - Clinical Measures

Four validated clinical measures were completed by participants to provide further background information and to enable preliminary comparisons to be made with factors resulting from the Q-sorts. The self-report measures are freely available and standardised. They have adequate validity and reliability and are used on a weekly basis at the psychology service, so were already familiar to all participants.

- *Patient Health 9-item Questionnaire (PHQ9;* Kroenke, Spitzer & Williams, 2001) - A measure of the severity of depression with good internal reliability (Cronbach's $\alpha = .89$). A score of 10 or above out of 21 indicates caseness with 88% specificity and 88% sensitivity.

- *Generalised Anxiety Disorder 7-item Questionnaire (GAD7;* Spitzer et al., 2006) - A measure of the severity of anxiety with good internal reliability (Cronbach's α = .92). A score of eight or above out of 21 indicates caseness with 82% specificity and 89% sensitivity.
- *Work and Social Adjustment Scale (WSAS;* Mundt et al., 2002) - A measure of general impairment in five areas: work, home, social and private, leisure and relationships, with good internal reliability of the scales (Cronbach's α = .70-.94). Each scale is scored out of eight, a score of two or less (or 10 overall) indicates mild impairment. The WSAS is considered to be a valid measure of functioning and is used nationally in the Improving Access to Psychological Therapies services but as it is not used to indicate caseness specificity and sensitivity have not been calculated (Zahra et al., 2014).
- *Impact of Events Scale-Revised (IESR;* Weiss & Marmar, 1997) - A measure of traumatic stress, assessing distress caused by symptoms on three subscales: intrusion, avoidance and hyperarousal, with good internal reliability of the subscales (Cronbach's α = .82-.89). A total score of 33 out of 88 or above indicates caseness with 82% specificity and 91% sensitivity.

4.4.4. Stage 2 - Procedure and Administration of Q-Sorts

Firstly, participants reviewed the information sheet, then the researcher explained what would be involved and answered any questions. It was emphasised that participation was voluntary and participants could withdraw from the study at any time, without giving a reason. If participants agreed to take part, they signed two consent forms, one retained by the participant and one by the researcher. Participants were offered travel expenses, up to £10 for mileage or public transport costs, which was accepted by eight out of 30 participants. Participants were also entered into a prize draw for two prizes of £50 worth of vouchers; this was declined by six participants. The researcher then explained the procedure of the research and again answered any questions. It was important for the researcher to inform participants that in attempting to gain a representative view of the way veterans cope with psychological difficulties; this inevitably led to gaining statements about both positive and negative coping strategies. Therefore, some statements may be sensitive and could lead to difficult feelings for some participants. The researcher reassured all participants they could stop at any point and discuss concerns and they were again reminded about their right to withdraw.

The researcher then explained how to complete the Q-sort, starting with asking participants to keep in mind the sentence "when faced with psychological difficulties I cope by…" and encouraging them to think about the meaning of the statements to them, at the present time. Participants then reviewed all 54 statements and sorted them into three piles, those they agreed with, those they disagreed with and those they felt neutral about. They were advised they could change their mind later. Once the statements had been sorted, the researcher asked participants to rank the statements on a scale from -5 (most disagree) to +5 (most agree) with 0 being neutral. Laminated cards numbered from -5 to +5 were placed on the table as a guide for participants. The number of cards placed at each rank was illustrated by a matrix with a forced-choice normal distribution (Appendix 2). This was designed with a slightly steeper kurtosis, as the topic is quite complex and may be something the participants have not explicitly considered about themselves before. It also reduces the number of decisions and allows more cards to be placed at the extreme poles (-5 and +5) (Watts & Stenner, 2012; Brown, 1980). The participants were encouraged to view each statement in relation to all others, by laying out all the cards and prioritising which statements were most and least important to them. Participants first sorted those statements they agreed with most onto the distribution, starting by selecting the two statements they agreed with most (+5), then the next three they agreed with most (+4) and so on. This was repeated with those statements they disagreed with starting with the two they disagreed with most (-5) and finally with the statements they felt neutral about (0). The participants took between 10 and 40 minutes to complete the Q-sort.

After the Q-sort, participants were asked open-ended questions about the decisions they had made, the Q-sort statements and the topic itself. The researcher then collected some demographic information and informed participants that other demographics would be collected from information already collated by the psychology service to reduce the amount of repeated questions. Participants were then asked to complete four standardised measures, as detailed below, while the researcher made a note of the positions of each statement. Lastly, the researcher gave participants the debrief sheet and went through the information to ensure they felt no negative impact from completing the research and that they knew where to go for support. The whole research process took between 40 and 90 minutes for most participants. However, one participant took 120 minutes as he deliberated in-depth about his decisions, discussed them as he went along and took several breaks.

4.5. Data Analysis

Data were analysed using the PQMethod 2.35 with PQROT 2.0 specifically for Q methodology (Smolck, 2014). By-person factor analysis was completed, which compares participants' whole Q-sorts.

Factors were extracted using the centroid method. Initially, five factors were extracted based on the recommended principle of one factor per six Q-sorts (30 Q-sorts). This resulted in two factors that did not meet recommended parameters. The analysis was re-run with four factors and resulted in three factors that reached significance levels. Significance was decided with the use of the Kaiser-Guttman criterion (Watts & Stenner, 2012), which states that factors should be extracted if they have Eigenvalues greater than one. An Eigenvalue represents the sum of all the squared Q-sort loadings on that factor, the three chosen factors had Eigenvalues of 6.97, 3.30 and 2.18 (Watts & Stenner, 2012). Another important parameter is referred to as Humphrey's rule, which states that at least two Q-sorts should have significant factor loadings on an extracted factor, calculated with the following equation (Watts & Stenner, 2012; Brown, 1980):

$$\text{Minimum loading} = 2.58 \times (1 \div \sqrt{\text{no. of items in Q-set}})$$
$$= 2.58 \times (1 \div \sqrt{54})$$
$$= 2.58 \times (1 \div 7.3484)$$
$$= 2.58 \times 0.1360$$
$$= 0.3510 = 0.35$$

Using these criteria, three factors were loaded on significantly by 13, 11 and 15 participants respectively. Factors were then rotated to a simple structure using the varimax method, which ensures the factors 'account for the maximum amount of study variance' which in this case is 42% of the variance (Watts & Stenner, 2012, p.122). Each factor is represented by a Q-sort that summarises the viewpoint of a group of participants and each factor loading represents how closely each participant's Q-sort coincides with this particular viewpoint (Watts & Stenner, 2012). The factor loading varies between 0 (not a match with the factor) and 1 (perfect match with the factor), higher loadings show a closer match with the factor Q-sort (see Table 2).

Table 2 - Factor matrix after varimax rotation of all participants' loadings on each factors

Participants	Factor 1	Factor 2	Factor 3
1	0.25	0.19	0.45*
2	-0.00	0.19	0.67*
3	0.72*	0.00	0.15
4	0.22	0.20	0.46*
5	0.03	0.58*	-0.27
6	-0.06	0.13	0.57*
7	0.07	0.04	0.53*
8	0.27	0.24	0.42*
9	0.69*	0.05	-0.03
10	0.48*	0.28	0.17
11	0.17	-0.18	0.50*
12	0.11	0.09	0.68*
13	0.82*	-0.14	-0.00
14	0.45*	0.52*	0.16
15	0.07	-0.05	0.65*
16	0.38*	0.14	0.35*
17	0.04	0.62*	0.45*
18	0.07	0.41*	0.30
19	0.23	0.61*	0.05
20	0.51*	0.14	0.37*
21	-0.09	0.76*	0.19
22	-0.47*	0.48*	-0.08
23	0.40*	0.07	0.06
24	-0.19	0.76*	0.05
25	0.35*	-0.00	0.50*
26	0.06	0.39*	0.16
27	0.48*	0.08	0.31
28	0.36*	0.40*	0.57*
29	0.43*	0.15	0.36*
30	0.33	0.51*	0.02
% variance	14	13	15

*Significant loading determined by Humphreys rule.

All participants significantly loaded on at least one factor, seven participants were confounded as they significantly loaded on two or more factors. Only one participant loaded negatively on one factor (participant 22 on factor one) which means the participant endorsed the polar opposite viewpoint to that represented by the factor. Factor arrays were constructed for each factor, which represent a composite Q-sort reflecting the overall viewpoint of that factor with each statement in its place on the Q-sort response matrix (Appendices 3-5). Factor crib sheets for each factor were then developed, which included the statements ranked at +5, +4, -5 and -4 and the statements ranked higher or lower in that factor than any other (Watts & Stenner, 2012). The whole factor array was explored for other relevant items at any ranking, which added to the interpretation of the factor. This process and the use of abduction, creating hypotheses and using evidence in the form of statements and demographics to support them, is to ensure engagement with all statements in each factor to take a holistic approach in interpretation (Watts & Stenner, 2012).

5. Results

The following factor descriptions are based on interpretation of individual statement rankings (indicated in parenthesis), the factor arrays, crib sheets, qualitative information and demographic information in Table 2.

5.1 Factor One – Healthily Active, with Positive Military Identity

Thirteen participants significantly loaded on this factor, they had an average age of 50.7 and were the oldest group. Most had a wife or partner (11/13) and no dependent children (10/11), most lived with people (8/13) and drank no alcohol or drank within recommended limits (12/13). This factor had the least self-referrals to the psychology service (3/13), the least amount of previous therapy (4/13) and joint highest number of participants who were discharged from therapy (6/13). This group had the longest service career with an average of 14.4 years compared to factor two (8.9) and factor three (8.2). The mean scores on all four clinical measures were the lowest out of the three factors. The measures still suggested a level of difficulty in this group, by looking at the number whose scores indicated caseness.

This group have a sense of positivity in life and in their military identity. They are taking responsibility (+2) for themselves by keeping healthy (+5) through active coping and using things they have learned in therapy (+5), but also sharing the load with others.

These participants actively engage in healthy strategies such as, exercising (+2), getting outdoors (+4) and doing things they enjoy (+2). They try to think of the positives (+2) and are able to accept things will go wrong sometimes (+3). They have engaged with therapy, voluntary organisations (+3) and veteran organisations (+1). Out of the three groups they ranked using things they have learned from therapy highest (+5) such as, techniques to bring them back to the here and now (+3) and breathing exercises (+1), mindful meditation was neutral (0) but still ranked highest in this group. They tended to endorse statements involving communication, talking to veterans most (+4), then family (+3) and although not rated highly, talking to friends (0) and socialising (0) were rated highest in this factor.

Regarding the military, this group ranked camaraderie (+2) and thinking of the positives about the military (0) highest, they also agreed with using banter (+1) like they did in the military. They disagreed with avoiding

anything to do with the military, ranking it the same as factor three (-2). They had the longest military careers, suggesting they may have had a more positive military experience.

Trying to stay in control is a common theme across all factors, being ranked at +4 by all three groups. This group also ranked the statement about thinking before they act highest (+3), which could suggest that along with their healthier, active strategies, they may be more successful in maintaining control. This may also be represented by the lower scores on the measures, suggesting that although they still experience some level of psychological difficulties, they manage these with support from others, keeping healthy and using their therapeutic techniques. As the group is slightly older they may have developed these strategies over time, they also have wives and partners for support and less responsibility for dependent children. A number of participants admitted they had tried many of the more unhealthy strategies before but learned they did not work.

For this group, coping was described as accepting you have a psychological issue and that it is not a sign of weakness. It is about taking charge, getting treatment that helps and finding a balance in managing the difficulties but still living life.

5.2 Factor Two – Unhealthily Avoidant with Negative Military Identity

Eleven participants significantly loaded on this factor and they had an average age of 44.1. Most had a wife or partner (8/13), no dependent children (7/11) and lived with people (8/11). This group had the highest amount of alcohol use, drinking in excess of the recommended limits (5/11) and within recommended limits (3/11). This was the only group who admitted substance use, involving recreational marijuana (2/11). Most have had previous therapy (8/11) and most were still in therapy when they completed the Q-sort (8/11). The average score on the WSAS indicated the highest level of impairment in this group.

This group expressed isolation, self-reliance and constant hypervigilance to threat with a pessimistic outlook. They endorse more unhealthy, avoidant strategies and almost convey a feeling of self-punishment. Although two participants reported drug use, they still ranked this statement lowest, as in all three factors (-5), along

with causing themselves physical pain. They are avoidant of many things, including anything to do with the military, there is a sense that negative consequences from their military experience are still being endured.

These participants choose to isolate themselves (+5) to stay safe, as they do not trust people. They ranked statements involving talking or interaction with people lowest and ranked blaming others when things go wrong (+1) higher than the other groups. They do not seek social support from religion (-4), family (-3) or friends (-3) even though they mostly live with a wife or partner. This isolation and avoidance of people translate into higher impairment on the WSAS. They act autonomously, trying to solve their own problems (+3), but without taking responsibility for their own health (-1). This is also demonstrated in their use of alcohol (+3) and pretending everything is ok (+3). They acknowledge a desire to gain some understanding about what is going on with them (+1), and they use therapeutic techniques, especially to bring them back to the here and now (+4), as it was ranked highest out of the groups. They also use breathing exercises (+1) but there is a suggestion these techniques may be used to moderate strong feelings of anger (+4) and hypervigilance in an attempt to try to stay in control (+4), as they struggle to think before they act (0).

Hypervigilance, keeping watchful and alert, was strongest in this group (+5) and it impacts on their everyday life. Participants described having to plan everything and be organised (+1), being on edge in unfamiliar surroundings, needing to have their back to the wall and be aware of all the exits. This group could not look towards the future, they just buckle down (+1) and get on with things by living day to day (+3) or "just surviving".

This group use mainly avoidance to deal with their difficulties, using alcohol to avoid their emotions (+2), keeping busy for distraction (+2) and avoiding socialising (-4), the news (+2) and going to sleep (+3). This avoidance also involves anything to do with the military as they ranked this statement highest (+1). Other statements related to the military, such as camaraderie (-2), banter (0), talking to other veterans (-1) or accessing veterans organisations (-2), were ranked lower than the other factors. As this group ranked causing themselves physical pain lowest (-5), this may suggest a definite line they will not cross. However, one participant described causing yourself mental pain by making you feel at your lowest, "worthless", so you could not go any lower, as happened in the military, they tried to break you to make you stronger.

Coping for this group meant being normal and learning to live again, as they can feel like a "nutter" or a "prisoner" in their own head. They do not want to be judged, they are embarrassed to have psychological difficulties and think others will see them differently. Ultimately it is about stopping themselves getting to the point of losing control, having a "mental breakdown" and "where you are crying yourself to sleep [or] killing yourself".

5.3 Factor Three – Ambivalently Striving, without Clear Military Identity

Fifteen participants significantly loading on this factor, they were the youngest group with an average age of 43.4. By a small margin, on average, this group had the shortest military careers (8.2 years) and shortest amount of time since discharge (16.4 years). This group contained the most participants ranked as private or equivalent (11/15) on leaving the military. Most had a wife or partner (11/15) and this group also had the highest amount of participants with dependent children (8/15). This factor contained the largest amount of unemployment (9/15), had the most long term physical health conditions (11/15) and the worst levels of mobility (9/11 fair or worse). Most had had previous therapy (8/15), this group contained the most self-referrals to the psychology service (6/15) and the highest amount of PTSD as their primary referred problem (9/15). There was the lowest amount of alcohol use in this group with most not drinking alcohol (11/15) and the rest within recommended limits (4/15). Again, by a small margin, the average scores on all measures, except the WSAS, were the highest out of the three groups. This group also took slightly longer to complete the research process and Q-sort task than the other participants overall, by three to 10 minutes.

This group has a less defined identity than the other two groups with a feeling of ambivalence. Their demographic information shows that as a group, they have a number of different difficulties and although they did not endorse causing themselves pain, they ranked it highest out of the three factors (-1) as well as getting angry (+5). There is a sense that these participants are striving towards change, as they are seeking help. However, there is a more disjointed passive approach, leaving them seeming to be the most vulnerable as a group. There is also an ambivalence towards the military with neither a strong positive or negative identity.

This group ranked veteran organisations (+2) and voluntary organisations (+3) the most highly of the three and with the most self-referrals they have actively sought help. They use things they learned in therapy (+3) and they want to increase their understanding about their difficulties most (+2), suggesting a desire to take active steps towards positive change. However they ranked the therapeutic techniques lowest, they also endorse taking medication the most (+5), which possibly suggests a more passive attempt to improve the way they feel. The medication could be due to the higher level of long term health conditions and mobility difficulties, but it could also be due to the higher scores on the measures. One participant explained he took medication for his psychological difficulties to help him calm down and think clearer. This group do things they enjoy (+2), such as getting outdoors (+1), but physical activities possibly may be difficult due to having poorer health and mobility.

There is also an element of avoidance similar to factor two, they tend to avoid sleep (+2) and pretend everything is ok (+3). However, they do not use alcohol and ranked these statements the lowest out of the groups (-5). While some participants acknowledged they historically had a problem with alcohol, this did not seem to be the case for all. Not using alcohol may be related to control, it was as important to this group, especially as they ranked getting angry highest (+5). There is also an element of control in the strategies involving hypervigilance and isolation, both ranked highly (+4). They also tend not to talk to friends (0) or family (-2) but use social networking more than the other groups (+1). Although this group is seeking help there is still a vulnerability to them, as they live day to day (+3) and ranked being kind to themselves the lowest (-4). As suggested earlier, they ranked causing themselves physical pain the highest out of the three groups (-1) and there is more of a concern about this group as they mostly lack the structure of employment but have dependent children to support.

This group do not actively avoid the military (-2), they do talk to other veterans (+1) and agree with camaraderie (+1), they also agreed with using banter the most (+2). However, they do not go to remembrance ceremonies (-2) or think about the positives of their military experience (-1) and they remain hyper-vigilant to threat. This unclear military identity may be because they have served less time, but the general ambivalent nature of this group feels as though they do not really know who they are or what works for them. This may have been reflected in the way they took the longest to complete the research as they struggled to express how

they cope. One participant ranked getting outdoors and listening to music highest initially but realised these were things he wanted to do and what he actually does is get angry and avoid sleep.

Coping for this group was again unclear, for one participant it felt like "being in a vacuum and not being able to operate" but needing to make sense and find answers for the sake of his children. Some felt it was something you had to do alone because no one understands, others felt getting help was the only way to help yourself and get a "second chance" at life.

6. Discussion

This study has identified viewpoints about coping with psychological difficulties that male veterans in the North West of England may possess. The findings demonstrate differences in the way this sample of veterans are coping and supports the recognition of the complexities in working with this group and how a 'one-size fits all' approach to their care is not likely to be effective (MacManus & Wessely, 2013; Greenberg et al., 2003). The three factors appear to represent viewpoints on a continuum from unhealthily avoidant and negative coping, through a transition phase of ambivalently striving, to healthily active and positive coping. One participant described how he felt the statements he had ranked towards the agree end looked as though they represented positives from being in the military and the statements he had ranked towards the disagree end, represented negative consequences of being in the military.

There are some similarities across all three factors with the two strongest themes represented by the statements that were placed at the same ranking by all three groups. 'Trying to stay in control' was agreed with by all groups (+4) and 'using drugs' was disagreed with by all groups (-5). Avoidance was a strong theme across factors two and three, represented by highest levels of agreement with avoidant strategies both behavioural or explicit, such as 'avoiding going to sleep', and cognitive or implicit, such as 'ignoring difficult feelings'. Other similar themes across the groups were represented by agreement with the statement, 'using things I learned in therapy' and disagreement with statements related to causing physical pain and religious beliefs.

6.1 Previous Literature

As with all the statements, the meaning of staying in control for each participant may be different, this is supported by the different patterns of response. In the literature, the theme of control in how veterans cope is not well researched, but where featured, it tends to take different forms and can be seen as positive or negative. Benotsch et al. (2000) related control to hardiness, autonomy and perceived ability to make change. This may relate to factor one due to their positivity or to factor two for their autonomy. Hyer et al. (1996) found, along with distancing and self-criticism, veterans coping with traumatic war memories used self-control strategies such as keeping feelings to themselves, which is similar to the avoidance used by factor two. Pietrzak et al. (2011) found veterans with PTSD used social control when they had unwanted thoughts, involving asking friends how they deal with similar thoughts. None of the three groups strongly agreed with talking to friends, but factor one most strongly agreed with talking to other veterans and family so could gain social support from them. Control may relate to a feeling of mastery; when a person feels they have mastery over something, they may feel more able to do something about it and therefore more likely to use problem-focused coping and active strategies, similar to factor one (Wolfe et al., 1993).

Substance misuse, in previous research, can refer to drugs or alcohol and there is research to suggest associations between mental health problems and higher substance use in veterans (Heltemes et al., 2014). Veterans are seen to be at risk of substance misuse, especially younger male veterans, in attempting to cope with symptoms of PTSD and depression (Ashcroft, 2014; Cucciare et al., 2011). The viewpoints expressed do not appear to support these findings, although factor two still involved endorsement of alcohol. Golub and Bennett (2014) found, heavy drinking actually reduced after leaving the military but marijuana use increased. Although two participants reported infrequent drug use, a number of the participants described zero tolerance towards drugs. However, Golub and Bennett (2014) also found that some active service personnel began to misuse painkillers, which continued after leaving the military. Factor three strongly entailed endorsement of the use of medication, but there was no indication of medication type or if used over recommended limits. Factor two involved the use of alcohol to cope, factor three had the most long term health conditions and poorest mobility and they both had the poorest scores on the measures. This fits with the previous findings from the same psychology service as Giebel, Clarkson & Challis (2014) found that those who used alcohol or

had poor mobility, benefited least from therapy in terms of symptom reduction and showed the most adjustment difficulties, relating to their work and social lives.

Avoidance has been highlighted frequently in veteran literature, it has been associated more with veterans who have PTSD and tend to be self-punishing (Boden et al., 2012; Pietrzak et al., 2011), they also tend to have poorer adjustment, as in factor two (Desmond & MacLachlan, 2006; Wolfe et al., 1993). Hassija et al. (2012) proposed that reduced hope and more avoidance may increase the risk of depression in veterans exposed to trauma, they identified promoting emotional expression as a way to help improve adjustment.

6.2 Research Process

There were a number of challenges during this study, in terms of recruitment and data collection, due to the need to cover a wide geographical area and complete the Q-sorts in person. However, the research team felt it had been invaluable to be present and gain important qualitative and observational information despite the difficult logistics. Gaining the desired number of participants was difficult, as approximately 72 veterans were approached about the research and one participant did not attend the arranged meeting. However, the researcher was struck by the motivation and determination of those who did take part, mainly with the hope of helping others and often without compensation. A number expressed difficulties they had endured to attend the appointment, due to anxiety, hypervigilance about the unfamiliar and physical health problems; some had taken time off work to attend and one attended on his birthday. The participants actively and openly engaged with the task, they appeared interested and wanted to complete it to the best of their ability. A number of participants expressed some distress at points during the research; this was due to a variety of reasons, such as recalling traumatic events to illustrate what they were coping with. As the researcher is a training clinical psychologist, she ensured the participants were not expressing risk related behaviours and thoroughly discussed the debrief sheet. One participant was telephoned after the research meeting, by a qualified clinician from the service, to assess his well-being. The researcher also used appropriate supervision to discuss her own feelings. Some participants described the impact of seeing the coping strategies written down, how it 'hit' them quite hard sometimes and made them realise what they actually do to cope. This was an important strength of this methodology, as the statements prompted their thinking and how they answered the qualitative

questions. They may have found it more difficult to describe their coping strategies if they had just been asked direct questions.

6.3 Clinical Implications

The factors represent a range of viewpoints and it is useful for clinicians to know that there is a range of both problem-focused and emotion-focused strategies endorsed by the participants as proposed by Lazarus and Folkman (1984). It could be suggested that those in factor one appear to endorse more problem-focused strategies, then factor three and least in factor two, involving making positive changes. However, overall there is a strong emphasis, especially in factor three, on emotion-focused coping such as avoidance of difficult feelings, expressing anger and distancing. The earlier suggested continuum of factors could also be related to the stages of change theory proposed by Prochaska and DiClemente (1982). There is a sense that those in factor two may be in the pre-contemplation stage because they are not currently thinking about change or possibly in the relapse stage where they have returned to previous ways of coping. Factor three could represent those in the contemplation stage with ideas of moving into the preparation stage as they start to consider making changes. Factor one could represent the action or maintenance stages where they are making changes and trying to preserve. This suggests that those in earlier stages may be more emotion-focused and it is not until later stages of change that problem-focused approaches are used more. Important elements involved in making these changes may relate to developing resilience and a sense of more control as acknowledged earlier (Pietrzak & Southwick, 2011). This information is beneficial for clinicians as it can help indicate a person's level of motivation, resilience, perception of control and whether they are mainly using emotion-focused coping which can inform the most appropriate approach to use.

How the participants experienced the Q-sort task may have implications for how it could be used as a 'therapeutic tool' (Gregg, Haddock & Barrowclough, 2009). The way they described the written statements helping them realise and acknowledge aspects about themselves, suggests this method may be a useful way to engage them in therapy. It may be most helpful in the earlier stages of assessment or treatment, to encourage self-exploration, give them a less threatening way to express themselves and aid development of the therapeutic relationship (Lambert & Barley, 2001; Bordin, 1979). This may help identify what is most and least important to them in the way they cope with psychological difficulties. Therefore, enabling the clinician

to help them work towards the more positive, active strategies used by factor one, such as emotional expression, as suggested by Hassija et al. (2012).

In relation to PTG, participants in factor one appear to be the most likely to experience growth due to their more positive and active coping strategies (Dekel et al., 2011; Feder et al., 2008). However, they may also represent the more resilient group and so have less to grow from (Zerach et al., 2013). None of the three factors endorsed religious beliefs as implicated in previous research (Tait, 2013; Trevino et al., 2012). It may be useful to incorporate a measure of PTG into further research, to enable more links to be made between coping and positive growth.

In terms of clinical practice, all three factors positively endorsed the statement about using techniques they had learned in therapy. However, there is a possibility of bias as participants were aware that the research was being completed with the psychology service and the majority were still in treatment. Overall, the participants expressed gratitude to the service for the improvements they had made. Hence it is feasible they would want to evaluate the service positively. However, the specific techniques such as breathing exercises and meditation were not ranked higher than +1; only grounding in the here and now was ranked at +3 and above, by two factors. Through completing the Q-sorts, the participants appeared to be honest, genuine and wanted to make sure their decisions were authentic for them, as demonstrated by the time taken to process and rank each statement. It seems unlikely that social desirability had any bearing on their statement rankings.

6.4 Limitations

The main limitations of the study were the small, self-selecting sample and the low amount of variance accounted for by the factor analysis. The sample size was adequate for the methodology and as a number of interesting findings have resulted, this helps to support this concept especially when exploring a new area. As the sample were mainly self-selecting, there is a possibility that those who chose not to take part could have had different characteristics, experiences and viewpoints, resulting in response bias. It would be useful to explore why people chose to participate or not. As only 42% of the variance was accounted for by the three factors, this suggests that the remaining accounts were too idiosyncratic to build further significant factors. It is important that male veterans are not therefore, expected to all fit into one or more of these three factors. A

general limitation of Q methodology is that it is unlikely to uncover all the possible viewpoints that apply to a given sample and although findings are representative of the sample, they may not be generalisable to the wider population.

In Q methodology, there can be a risk of bias in the development of the Q-set and interpreting the factors (Cross, 2005). However, the methods and processes used have been transparently described to reduce this possibility. The statements were developed collaboratively by the four person research team, using detailed interviews and relevant literature, to ensure the most representative statements were included. The researcher was also aware of her own position in terms of feelings and views on the subject, such as a desire to find positive themes and hoping to be able to feedback encouraging findings. The researcher ensured that these feelings did not impact on factor interpretation by reflecting on and discussing them in supervision, and collaboratively reviewing factor interpretation and description. Due to the way Q methodology is designed the results are generated directly by the participants rather than any preconceived idea, therefore…"Q research always has the power to surprise, no assumption about the way understandings are structured is built into the method" (Cross, 2005, p. 211).

Even though a large amount of demographic information was collected for this sample and shows some trends in relation to participants loading on each factor, causation cannot be inferred from these findings. There are numerous other characteristics that may have influenced the viewpoints expressed, that have been found to be relevant in other literature, but were not included. For example, level of combat exposure (Avery & McDevitt-Murphy, 2014; Fuehrlein et al., 2014) and pre-service vulnerabilities such as childhood adversity (Ashcroft, 2014; Fear, Wood & Wessely, 2009), may play an important role in the way veterans cope, but this was outside the scope of this research.

6.5 Future research

This study has highlighted the need for more research into the role of control in how veterans cope with psychological difficulties and how this may impact on their overall coping approaches. It would be worthwhile to repeat the study with female veterans and with a bigger, more national sample to gain greater representation of veterans outside the North West of England. It would also be helpful to look at veteran

samples who have not accessed psychological therapy, as there is little knowledge of the way British veterans who have not received treatment, are coping.

There were a number of statements that did not discriminate well between the factors as they were ranked at the same or similar values. Some example non-discriminatory statements were; 'being organised to avoid surprises (0, +1, 0) and 'using creative expression' (-1, -2, -2). Although the statements about control and drugs were also ranked the same across the factors, they showed common themes important to most participants at high levels of agreement and disagreement. In the qualitative section of the research, participants were asked if they felt any ways of coping were missing from the Q-set. Themes suggested by only one person were considered too individual and not representative. Three themes were described as being important, by two participants each. One theme was the role of owning dogs, they helped them get outdoors for exercise, gave them someone else to care for and gave them unconditional care and companionship. They were also helpful for grounding techniques, such as touching them helps to come back to the present. Mainly anecdotal evidence about Animal Assisted Therapy suggests dogs may be beneficial psychologically (grounding) and socially, for veterans with PTSD as they "help deal with their fundamental human needs for safety, affiliation and succourance" (Taylor, Edwards & Pooley, 2013, p. 593). Another suggested theme was gaming, either playing games on a console with an online community, which was partly sociable and for distraction, or developing games with a group of like-minded people. The third suggestion was seeking help, although it was felt that this was covered within the different ways and places to seek help already included in the Q-set, there may be a place for a more explicit statement such as, 'asking for help'. In further research with this Q-sort, it would be important to review the statements in the Q-set and consider removing some less discriminatory statements and including these three areas.

7. Conclusion

Although limited, this study is the first to explore how male British veterans are coping with psychological difficulties, from their own perspective. It demonstrates the diversity and range of strategies used in a sample of veterans who have accessed psychology services and gives support to the argument against a 'one size fits all' approach. The findings of this study will be disseminated through a summary report to participants and presentations to the psychology service and the doctorate of clinical psychology research conference. It is

hoped that this study will help to raise awareness of the complexities related to veterans coping with psychological difficulties and the need for more research in this area to help inform services to tailor the support they offer.

8. References

Lord Ashcroft 2014, The Veterans Transition Review. [Accessed 29 May 2015] Available from: http://www.veteranstransition.co.uk/

Avery, ML & McDevitt-Murphy, ME 2014, Impact of combat and social support on PTSD and alcohol consumption in OEF/OIF veterans, *Military Behavioral Health*, vol. 2, pp. 217-223.

BBC News 2015, Veterans' mental health: Referrals rise by 26%. [Accessed 6 April, 2015] Available from: http://www.bbc.co.uk/news/uk-32126052

Benotsch, EG, Brailey, K, Vasterling, JJ, Uddo, M, Constans, JI & Sutker, PB 2000, War zone stress, personal and environmental resources, and PTSD symptoms in Gulf War veterans: A longitudinal perspective, *Journal of Abnormal Psychology*, vol. 109, pp. 205-213.

Boden, MT, Bonn-Miller, MO, Vujanovic, AA & Drescher, KD 2012, A prospective investigation of changes in avoidant and active coping and posttraumatic stress disorder symptoms among military veterans, *Journal of Psychopathology and Behavioral Assessment*, vol. 34, pp. 433-439.

Bordin, ES 1979, The generalizablity of the psychoanalytic concept of the working alliance, *Psychotherapy: Theory, Research and Practice*, vol. 16, pp. 252-260.

Bonn-Miller, MO, Vujanovic, AA & Drescher, KD 2011, Cannabis use among military veterans after residential treatment for posttraumatic stress disorder, *Psychology of Addictive Behaviors*, vol. 25, pp. 485-491.

Brenner, LA, Gutierrez, PM, Cornette, MM, Betthauser, LM, Bahraini, N & Staves, PJ 2008, A qualitative study of potential suicide risk factors in returning combat veterans, *Journal of Mental Health Counseling*, vol. 30, pp. 211-225.

Brown, SR 1980, *Political Subjectivity: Applications of Q Methodology in Political Science*, Yale University Press, New Haven.

Burnell, KJ, Coleman, PJ & Hunt, N 2010, Coping with traumatic memories: Second World War veterans' experiences of social support in relation to the narrative coherence of war memories, *Ageing & Society*, vol. 30, pp. 57-78.

Campbell, TA, Picket, TC & Yoash-Gantz, RE 2010, 'Psychological rehabilitation for US veterans', in E Martz (ed.), *Trauma rehabilitation after war and conflict*, pp. 159-176, Springer, New York.

Cross, RM 2005, Exploring attitudes: The case for Q methodology. *Health Education Research: Theory and Practice*, vol. 20, pp. 206-213.

Cucciare, MA, Darrow, M & Weingardt, KR 2011, Characterizing binge drinking among U.S. military veterans receiving a brief alcohol intervention, *Addictive Behaviors*, vol. 36, pp. 362-367.

Dekel, S, Mandl, C & Solomon, Z 2011, Shared and unique predictors of post-traumatic growth and distress, *Journal of Clinical Psychology*, vol. 57, pp. 241-252.

Desmond, DM 2007, Coping, affective distress, and psychosocial adjustment among people with traumatic upper limb amputations, *Journal of Psychosomatic Research*, vol. 62, pp. 15-21.

Desmond, DM & MacLachlan, M 2006, Coping strategies as predictors of psychosocial adaptation in a sample of elderly veterans with acquired lower limb amputations, *Social Science and Medicine*, vol. 62, pp. 208-216.

Fear, Wood, D & Wessely, S 2009, Health and social outcomes and health service experiences of UK Military Veterans: A summary of the evidence. [Accessed 29 May 2015] Available from: http://webarchive.nationalarchives.gov.uk/20130107105354/http:/www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_113749.pdf

Feder, A, Southwick, SM, Goetz, RR, Wang, Y, Alonso, A, Smith, BW, Buchholz, K.R., Waldeck, T, Ameli, R, Moore, J, Hain, R, Charney, DS & Vythilingam, M 2008, Posttraumatic growth in former Vietnam prisoners of war, *Psychiatry*, vol. 71, pp. 359-370.

Ferguson, H 2015, *How do Male Military Veterans Cope with Psychological Difficulties?* A thesis submitted in partial fulfilment of the requirements of University of Liverpool for the Degree of Doctor of Clinical Psychology. Liverpool: University of Liverpool.

Fiedler, N, Lange, G, Tiersky, L, DeLuca J, Policastro, T, Kelly-McNeil, K, McWilliams, R, Korna, L & Natelson, B 2000, Stressors, personality traits, and coping of Gulf War veterans with chronic fatigue. *Journal of Psychosomatic Research*, vol. 48, pp. 525-535.

Fossey, M 2010, Across the wire: Veterans, mental health and vulnerability. [Accessed 28 March, 2013] Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/28115/Across_the_wire.pdf

Fuehrlein, B, Ralevski, E, O'Brien, E, Jane, JS, Arias, AJ & Petrakis, IL 2014, Characteristics and drinking patterns of veterans with alcohol dependence with and without post-traumatic stress disorder, *Addictive Behaviors*, vol. 39, pp. 374-378.

Gallaway, MS, Millikan, AM & Bell, MR 2011, The association between deployment-related posttraumatic growth among U.S. army soldiers and negative behavioral health conditions, *Journal of Clinical Psychology*, vol. 67, pp. 1151-1160.

Galor, S & Hentschel, U 2012, Problem-solving tendencies, coping styles, and self-efficacy among Israeli veterans diagnosed with PTSD and depression, *Journal of Loss and Trauma: International Perspectives on Stress & Coping*, vol. 17, pp. 522-535.

Giebel, CM, Clarkson, P & Challis, D 2014, Demographic and clinical characteristics of UK military veterans attending a psychological therapies service, *Psychiatric Bulletin*, vol. 38, pp. 270-275.

Golub, A & Bennett, A.S 2014, Substance use over the military–veteran life course: An analysis of a sample of OEF/OIF veterans returning to low-income predominately minority communities. *Addictive Behaviors*, vol. 39, pp. 449-454.

Greenberg, N, Thomas, S, Iversen, A, Unwin, C, Hull, L & Wessely, S 2003, Do military peacekeepers want to talk about their experiences? Perceived psychological support of UK military peacekeepers on return from deployment, *Journal of Mental Health*, vol. 6, pp. 565-573.

Gregg, L, Haddock, G & Barrowclough, C 2009, Self-reported reasons for substance use in Schizophrenia: A Q methodological investigation, *Mental Health and Substance Use: Dual Diagnosis*, vol. 2, pp. 24-39.

Gutierrez, PM, Brenner, LA, Rings, JA, Devore, MD, Kelly, PJ, Staves, PJ, Kelly, CM & Kaplan, MS 2013, A qualitative description of female veterans' deployment-related experiences and potential suicide risk factors. *Journal of Clinical Psychology*, vol. 69, pp. 923-935.

Hagerty, BM, Williams, A, Bingham, M & Richard, M 2011, Military nurses and combat-wounded patients: a qualitative analysis of psychosocial care, *Perspectives in Psychiatric Care*, vol. 47, pp. 84-92.

Hassija, CM, Luterek, JA, Naragon-Gainey, K, Moore, SA & Simpson 2012, Impact of emotional approach coping and hope on PTSD and depression symptoms in a trauma exposed sample of veterans receiving outpatient VA mental health care services, *Anxiety, Stress & Coping: An International Journal*, vol. 25, pp. 559-573.

Heltemes, KJ, Clouser, MC, MacGregor, AJ, Norman, SB & Galarneau, MR 2014, Co-occurring mental health and alcohol misuse: Dual disorder symptoms in combat injured veterans. *Addictive Behaviors*, vol. 39, pp. 392-398.

Hyer, L, McCranie, EW, Boudewyns, PA & Sperr, E 1996, Modes of long-term coping with trauma memories: Relative use and associations with personality among Vietnam veterans with chronic PTSD, *Journal of Traumatic Stress*, vol. 9, pp. 299-316.

Houston, BK 1987, 'Stress and Coping', in CR Snyder & CE Ford, (eds.), *Coping with Negative Life Events: Clinical and Social Psychological Perspectives,* pp. 373-399, Plenum Press, New York.

Iversen, AC, Van Staden, L, Hughes, JH, Greenberg, N, Hotopf, M, Rona, RJ, Thornicroft, G, Wessely, S & Fear, NT 2011, The stigma of mental health problems and other barriers to care in the UK armed forces, *BMC Health Services Research*, vol. 11.

Jackson, WT, Taylor, RE, Palmatier, AD, Elliott, TR & Elliott, JL 1998, Negotiating the reality of visual impairment: Hope, coping, and functional ability, *Journal of Clinical Psychology in Medical Settings*, vol. 5, pp. 173-185.

Kroenke, K, Spitzer, RL & Williams, JB 2001, The PHQ-9: Validity of a brief depression severity measure, *Journal of General Internal Medicine*, vol. 16, pp. 606-613.

Lazarus, RS & Folkman, S 1984, *Stress, Appraisal and Coping*, Springer Publishing Company, New York.

Lambert, MJ & Barley, DE 2001, Research summary on the therapeutic relationship and psychotherapy outcome, *Psychotherapy: Theory, Research, Practice, Training*, vol. 38, pp. 357-361.

Larner, B & Blow, A 2011, A model of meaning-making coping and growth in combat veterans, *Review of General Psychology*, vol. 15, pp. 187-197.

MacManus, D & Wessely, S 2013, Veteran mental health services in the UK: Are we headed in the right direction? Journal of Mental Health, vol. 22, pp. 301-305.

McKeown, B & Thomas, D 1988, *Q Methodology*, Sage, Beverley Hills.

McNaught, A & Howard, C 2001, Q-methodology: pragmatic considerations and epistemological concerns, *Health Psychology Update*, vol. 10, pp. 24-28.

Mental Health Foundation 2013, The mental health of serving and ex-Service personnel: A review of the evidence and perspectives of key stakeholders. [Accessed 16 May, 2015] Available from: http://www.mentalhealth.org.uk/content/assets/PDF/publications/the-mental-health-of-serving-and-ex-service-personnel.pdf?view=Standard

Morin, R 2011, The difficult transition from military to civilian life, Pew social & demographic trends. [Accessed 16 May, 2015] Available from: http://www.pewsocialtrends.org/2011/12/08/the-difficult-transition-from-military-to-civilian-life/

Mundt, JC, Marks, IM, Shear, MK & Griest, JM 2002, The work and social adjustment scale: A simple measure of impairment in functioning, *British Journal of Psychiatry*, vol. 180, pp. 461-464.

NHS Choices 2011, *Veterans: Mental health*. [Accessed 20 April, 2013] Available from: http://www.nhs.uk/Livewell/Militarymedicine/Pages/Veteransmentalhealth.aspx

NHS Choices 2014, Armed Forces Healthcare. [Accessed 16 June, 2015] Available from: http://www.nhs.uk/NHSEngland/Militaryhealthcare/Pages/Militaryhealthcare.aspx

Pietrzak, RH, Harpaz-Rotem, I & Southwick, SM 2011, Cognitive-behavioral coping strategies associated with combat-related PTSD in treatment-seeking OEF/OIF veterans, *Psychiatry Research*, vol. 189, pp. 251-258.

Pietrzak, RH & Southwick, SM 2011, Psychological resilience in OEF-OIF Veterans: Application of a novel classification approach and examination of demographic and psychosocial correlates, *Journal of Affective Disorders*, vol. 133, pp. 560-568.

Prochaska, JO & DiClemente, CO 1982, Transtheoretical therapy: Towards a more integrative model of change, *Psychotherapy: theory, research and practice*, vol. 19, pp. 276-288.

Spitzer, RL, Kroenke, K, Williams, JB & Lowe, B 2006, A brief measure for assessing generalized anxiety disorder, *Archives of Internal Medicine*, vol. 166, pp. 1092-1097.

Stephenson, W 1935, Technique of factor analysis, *Nature*, vol. 136, pp. 297.

Schmolck, P 2014, The Q method Page. [Accessed 6 October, 2014] Available from: http://schmolck.userweb.mwn.de/qmethod/downpqwin.htm

Tait, RN 2013, The role of prayer coping and disclosure attitudes in posttraumatic outcomes among Iraq and Afghanistan veterans. (Doctoral dissertation). Retrieved from ProQuest (3605004).

Taylor, MF, Edwards, ME & Pooley, JA 2013, "Nudging them back to reality": Toward a growing public acceptance of the role dogs fulfil in ameliorating contemporary veterans' PTSD symptoms, *Anthrozoös*, vol. 26, pp. 593-611.

Tedeschi, RG & Calhoun, LG 1995, *Trauma and Transformation: Growing In the Aftermath of Suffering*, Sage Publications, Newbury Park.

Tedeschi, RG & McNally, RJ 2011, Can we facilitate posttraumatic growth in combat veterans? *American Psychologist*, vol. 66, pp. 19-24.

Trevino, KM, Archambault, E, Schuster, J, Richardson, P & Moye, J 2012, Religious coping and psychological distress in military veteran cancer survivors, *Journal of Religion and Health*, vol. 51, pp. 87-98.

Watts, S & Stenner, P 2012, *Doing Q Methodological Research: Theory, Method and Interpretation.* Sage Publications, London.

Weiss, DS & Marmar, CR 1997, 'The impact of event scale-revised' in JP Wilson & TM Keane (eds.), *Assessing Psychological Trauma and PTSD: A Handbook for Practitioners*, pp. 399-411, Guilford Press, New York.

Willig, C, & Stainton-Rogers, W (eds) 2008, *The SAGE Handbook of Qualitative Research in Psychology*, SAGE Publications Ltd, London.

Wilson, RM, Leary, S, Mitchell, M & Ritchie, D 2009, Military veterans sharing first-person stories of war and homecoming: A pathway to social engagement, personal healing, and public understanding of veterans' issues, *Smith College Studies in Social Work*, vol. 79, pp. 392-432.

Wolfe, J, Keane, TM, Kaloupek, DG, Mora, CA & Wine, P 1993, Patterns of positive readjustment in Vietnam combat veterans, *Journal of Traumatic Stress*, vol. 6, pp. 179-193.

Wood, MD, Foran, HM, Britt, TW & Wright, KM 2012, The impact of benefit finding and leadership on combat-related PTSD symptoms, *Military Psychology*, vol. 24, pp. 529-541.

Zahra, D., Qureshi, A., Henley, W., Taylor, R., Quinn, C., Pooler, J., Hardy G., Newbold, A & Bynd, R 2014, The work and social adjustment scale: Reliability, sensitivity and value, *International Journal of Psychiatry in Clinical Practice*, vol. 18, pp. 131-138.

Zerach, G, Solomon, Z, Cohen, A & Ein-Dor, T 2013, PTSD, resilience and posttraumatic growth among ex-prisoners of war and combat veterans, *Israel Journal of Psychiatry and Related Sciences*, vol. 50, pp. 91-98.

Chapter 3 - Appendices

Appendix 1 – Q-sort - Q-set Statements

1	Going to remembrance ceremonies
2	Using drugs
3	Drinking alcohol
4	Using alcohol to mask my problems
5	Drinking alcohol to escape my feelings
6	Trying to solve my own problems
7	Taking responsibility for my own health
8	Exercising
9	Getting outdoors
10	Trying to see a positive in everything
11	Trying to think about the positive things I got from the military
12	Using techniques to bring me back to the here and now
13	Using mindful meditation
14	Using breathing exercises
15	Buckling down and just getting on with things
16	Blaming others when things go wrong
17	Finding camaraderie with other veterans
18	Using humour when things get difficult
19	Using banter like I did in the military
20	Accepting that things will still go wrong sometimes
21	Increasing my understanding of what is going on for me
22	Keeping watchful and alert to possible threat
23	Isolating myself from other people
24	Socialising with other people
25	Avoiding anything to do with the military
26	Living day to day and not thinking about the future
27	Avoiding the news
28	Avoiding going to sleep
29	Pretending everything is ok
30	Ignoring difficult feelings
31	Getting angry

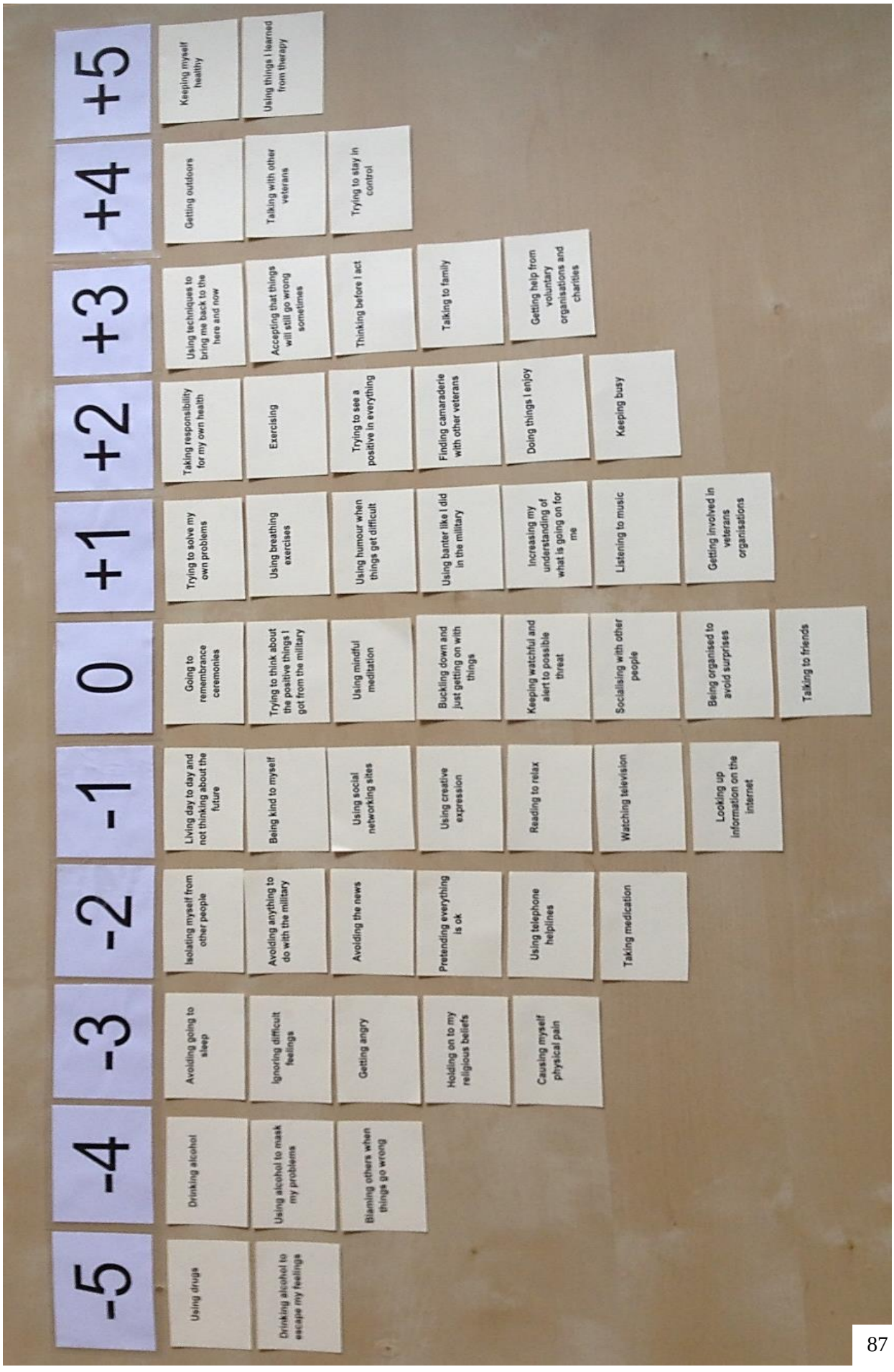
32	Thinking before I act
33	Being kind to myself
34	Being organised to avoid surprises
35	Talking with other veterans
36	Using telephone helplines
37	Talking to friends
38	Talking to family
39	Trying to stay in control
40	Doing things I enjoy
41	Holding on to my religious beliefs
42	Using social networking sites
43	Using creative expression
44	Keeping busy
45	Keeping myself healthy
46	Taking medication
47	Reading to relax
48	Watching television
49	Listening to music
50	Looking up information on the internet
51	Getting involved in veterans organisations
52	Getting help from voluntary organisations and charities
53	Causing myself physical pain
54	Using things I learned from therapy

"When faced with psychological difficulties, I cope by…"

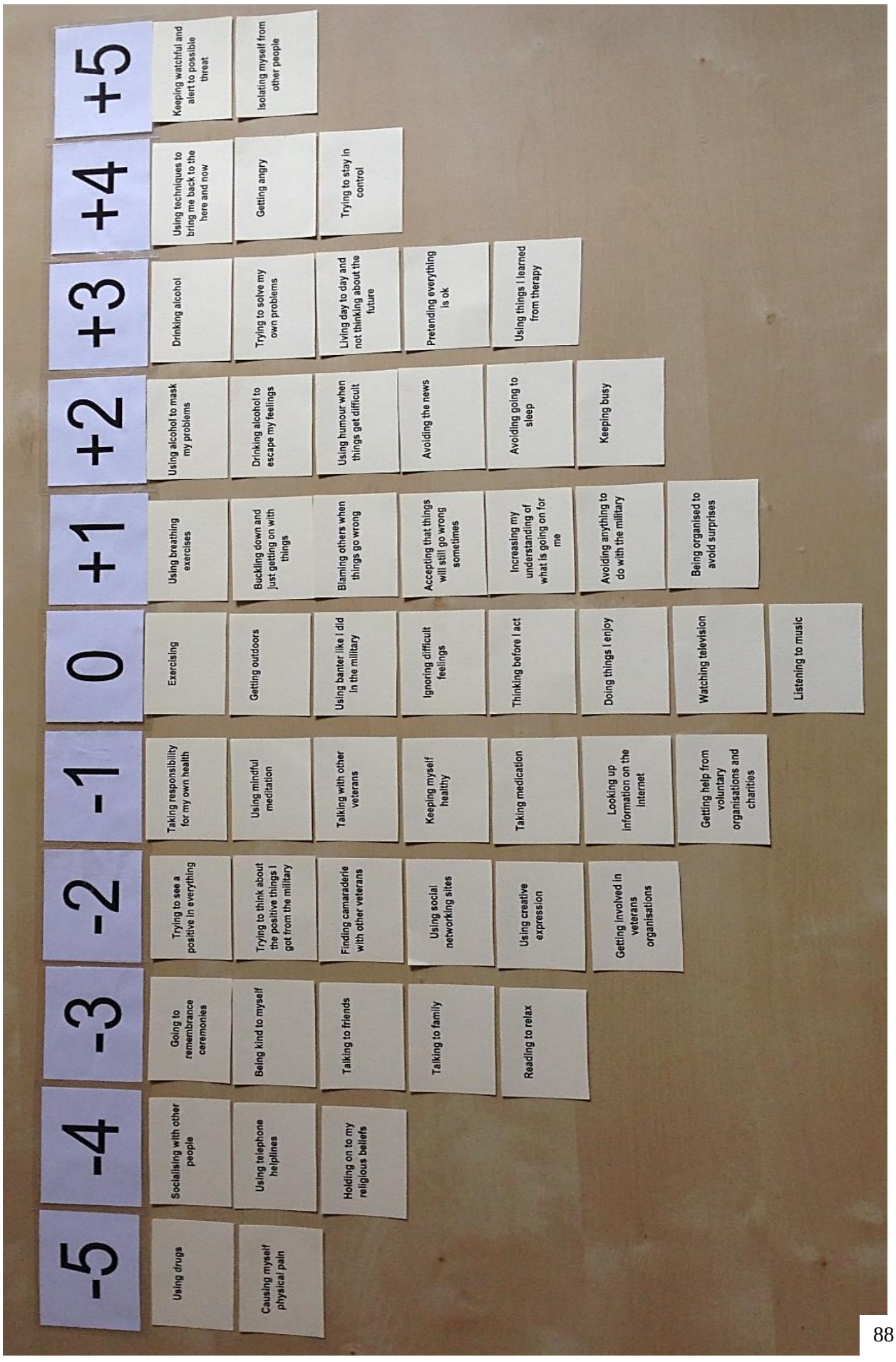
Most Disagree **Neutral** **Most Agree**

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
2										2
	3								3	
		5						5		
			6				6			
				7		7				
					8					

Appendix 3 – Factor Array - Factor One



Appendix 4 – Factor Array - Factor Two



Appendix 5 – Factor Array – Factor Three