COMBAT STRESS
FOR VETERANS' MENTAL HEALTH

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Edinburgh Napier UNIVERSITY

Complex Posttraumatic Stress Disorder in Ex-military Personnel

Contents

FOREWORD – COMPLEX POSTTRAUMATIC STRESS DISORDER IN EX-SERVICE PERSONNEL

The importance of understanding a health condition's diagnosis so that the appropriate intervention can be implemented is hard to overstate. This study has shown how one such condition, complex posttraumatic stress disorder in ex-Service personnel, and its relationship to other factors such as childhood trauma and exposure to combat operations, can and should be identified. Knowing this should encourage earlier diagnosis and more effective treatment, and hence better outcomes for ex-Service personnel and their families.

Most members of the Armed Forces make a successful and sustainable transition into civilian life. Some though leave the Armed Forces with continuing medical conditions, both physical and mental, who require no particular special treatment, and who can be supported in the same way as are all citizens in the United Kingdom, namely by the National Health Service. However, some leave with more complicated conditions that are caused by their time in the Armed Forces, and it is right that bespoke specialist services are developed to meet their needs.

Achieving the balance between general and specialist services is a hard ask in a fiscally-constrained public sector, recently made infinitely more challenging by the impact of COVID-19. But early diagnosis and intervention, removing the barriers to accessing services, and identifying what works, are relatively inexpensive steps that, if taken collectively, could deliver overall a healthier population of ex-Service personnel capable of playing a full and positive role in society.

Air Vice-Marshal Ray Lock CBE

Chief Executive, Forces in Mind Trust

1.0 Institutions and acknowledgements

1.1 Institutions

Combat Stress

Combat Stress is a national veterans' charity in the UK that was established in 1919. It specialises in providing clinical mental health services for UK veterans with a history of trauma. Combat Stress receives approximately 2,500 new referrals per year. Clinical services are spread across the UK with 14 community teams and three residential treatment centres. Clinical services are delivered by a multi-disciplinary team of clinicians and are informed by NICE approved guidance for the treatment of PTSD. Further information about Combat Stress can be found at combatstress.org.uk.

1.2 Acknowledgments

The authors would like to take this opportunity to thank all participants who took part in this study, without whom it would not have been possible. Likewise, we would like to thank Forces in Mind Trust (FiMT) for funding the project and also for their support throughout the project, particularly from Ray Lock (Chief Executive), and Kirsteen Waller (Health Programme Manager).

2.0 Glossary

Complex Posttraumatic stress disorder (CPTSD)	A psychological disorder caused by experiencing or witnessing a traumatic event or events. Symptoms include intrusive memories, avoidance, hyper-arousal with the addition of emotional dysregulation (i.e. emotional responses outside the accepted range), negative sense of self and disturbances in relationships.
Cognitive Behavioural Therapy (CBT)	A type of psychotherapy used to help a person change how they think, feel and behave by changing unhelpful thoughts, beliefs and attitudes and developing personal coping strategies.
Confidence interval (CI)	A range of values so defined that there is a specified probability (usually 95%) that the true value of an estimated parameter lies within it.
Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)	Published in 2013 by the American Psychiatric Association, the DSM-5 is the principal authority for psychiatric diagnoses in the United States.
Disturbances in self-organisation	A set of symptoms (affective dysregulation, negative self-concept and disturbances in relationships) which identify CPTSD in combination with the diagnostic criteria of PTSD.
Eye-Movement Desensitisation and Reprocessing (EMDR)	A type of therapy commonly used for PTSD that uses bilateral stimulation to assist clients in processing traumatic memories.
International Classification of Diseases 11th Revision (ICD-11)	A diagnostic manual released by the World Health Organization. The most recent interim was released in August 2018 and includes CPTSD as a stand alone disorder.
International Trauma Questionnaire (ITQ)	A self-report questionnaire intended to diagnose PTSD and CPTSD, as defined in the ICD-11.
Mindfulness	A psychological process of bringing one's attention to the present moment, which has been adapted for use in psychological therapies.
Posttraumatic stress disorder (PTSD)	A psychological disorder caused by experiencing or witnessing a traumatic event. Symptoms include intrusive memories, avoidance and hyper-arousal.

Psycho-education	A process of providing educational information relating to mental health and psychology.
Reliability	The degree to which a measure produces accurate and consistent results from one testing occasion to another.
Trauma re-living/processing	A process used in trauma-focused therapies whereby the client 're-lives' the trauma through speaking in detail about what occurred, usually with the aim of reducing intrusive memories of the trauma.
Validity	A measure is valid if it measures what it claims to be measuring – i.e. test outcomes from the measurement concur with theory and evidence.
WSAS	Work And Social Adjustment Scale, a measure of how a person's ill health condition affects their ability to perform daily tasks.

3.0 Executive summary

The World Health Organization (WHO), in the 11th version of the *International Classification of Diseases* (ICD-11), recognised two distinct disorders related to post-traumatic stress: Post-Traumatic Stress Disorder (PTSD) and Complex PTSD (CPTSD). PTSD is a condition comprising three clusters of symptoms: re-experiencing of the traumatic memory, avoidance, and a sense of threat. CPTSD includes these PTSD symptom clusters and three additional clusters of symptoms: affective dysregulation, negative self-concept, and disturbances in relationships (see 4.1 below for more detail on these symptoms and disorder definitions).

The International Trauma Questionnaire (ITQ) has been developed for the assessment of ICD-11 PTSD and CPTSD but has never been validated in a military population before. To address this research gap, the present project utilised an existing cohort of 177 veterans who completed a number of self-rated measures on history of life events, traumatic stress and comorbidities. Experiences with service utilisation were also investigated in a group of eight veterans with CPTSD.

This work has been conducted in three separate studies with different methodologies and samples, presented here in three separate chapters:

- In chapter A (section 4), results from an initial study to validate the ITQ in this cohort of veterans are presented.
- In chapter B (section 5), results from a study exploring the risk factors and comorbidity of PTSD and CPTSD in this cohort are discussed.
- Chapter C (section 6) describes the findings of a qualitative interview study on service utilisation of veterans with CPTSD.

Findings from each of the three studies are discussed individually in the respective chapters but a summary of conclusions and implications for training, practice and research from all these three studies is presented collectively in the final sections 8-10.

KEY FINDINGS

- The ITQ is a reliable and valid instrument for use with military personnel.
- CPTSD is a more prevalent condition and more comorbid condition than PTSD.
- History of childhood trauma and combat role were found to be unique risk factors to CPTSD.
- Veterans with CPTSD take longer to access services to address their difficulties, compared to veterans with PTSD.
- Qualitative interviews revealed that stigma regarding mental health treatment and feelings of unworthiness might impair formal help-seeking of those with CPTSD.
- CPTSD symptoms such as negative self-concept may act as a barrier to help-seeking for those with CPTSD.
- CPTSD is a more common and more debilitating condition than PTSD in UK veterans; thus there is an urgent need to test existing therapies and produce new therapies.

4.0 Introduction

4.1 Definitions of PTSD and complex PTSD

The 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; please see "Glossary" above for a full list of terminology in this report), published in 2013 by the American Psychiatric Association and used as the basis for psychiatric diagnoses in the United States, defines PTSD in terms of 20 symptoms arranged in four clusters[1]. By contrast the 11th version of the *International Classification of Diseases* (ICD-11), produced by the World Health Organization (WHO) in 2018 and due to be implemented 2022, defines two trauma-based disorders: PTSD and Complex PTSD (CPTSD), the latter of which does not exist in DSM-5[2].

The definition of PTSD in ICD-11 is simpler than that provided within the DSM-5, including just six 'core' symptoms; two symptoms each in three clusters. Symptoms in each cluster are directly related to one's traumatic exposure:

- re-experiencing in the here and now,
- avoidance, and
- a sense of current threat.

A diagnosis of PTSD according to ICD-11 criteria requires the presence of one symptom per cluster, plus evidence of functional impairment (i.e. suffering limitations in daily activities due to this disorder).

CPTSD includes these six 'core' PTSD symptoms *plus* an additional set of symptoms that are collectively referred to as 'disturbances in self-organisation' (DSO). These DSO symptoms are intended to capture pervasive psychological disturbances associated with traumatic exposure. DSO symptoms are distributed across three clusters:

- affective dysregulation (exhibiting extreme emotional responses),
- negative self-concept (evaluating the self in extremely negative terms), and
- disturbances in relationships (a tendency to avoid interpersonal relationships).

A CPTSD diagnosis requires that the PTSD criteria be met *in addition to* endorsement

[1] American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA: American Psychiatric Association, 2013
[2] World Health Organization: International statistical classification of diseases and related health problems (11th Revision), 2018

of symptoms from each of these DSO clusters.

Veterans generally respond less well to treatment for PTSD, and there are indications that CPTSD may be more common than PTSD among veterans; thus, a distinction between these conditions, and the consequent development of more specific interventions, may improve veterans' outcomes from PTSD treatments.

4.2 Application of PTSD definitions to the UK veteran population

ICD is more widely used as a classification system for mental disorders than DSM as it is more consistent with clinical practice, more restricted in the number of symptoms, and is based on drawing distinctions between diagnoses which are important for the management and treatment of disorders (Reed, 2010)[3]. It adopts a public health perspective aimed at maximizing clinical utility for the use of diagnoses worldwide. Considering that ICD is the primary diagnostic classification system in the UK, a study exploring the nature and extent of PTSD and CPTSD in UK military personnel is of paramount importance.

To date there have been at least 10 studies which predominantly support the distinction between PTSD and CPTSD, as per ICD-11 definitions in a range of community and clinical samples[4]. This distinction has only been tested among military veterans by one study, which examined a sample of 323 trauma-exposed US veterans and found that the distinction between PTSD and CPTSD symptoms as per the ICD-11 proposals was not supported (Wolf et al. 2015)[5]. However, it is important to note that the study did not employ a measure specific to the disease, such as the International Trauma Questionnaire (ITQ), which is the only measure that has been developed for the assessment of PTSD and CPTSD as per ICD-

[3] Reed GM. (2010). Toward ICD-11: Improving the clinical utility of WHO's International Classification of mental disorders. Professional Psychology: Research and Practice 41:457–464.
[4] Brewin, C. R., Cloitre, M., Hyland, P., Shevlin, M., Maercker, A., Bryant, R. et al. (2017). A review of current evidence regarding the ICD-11 proposals for diagnosing PTSD and complex PTSD. Clinical Psychology Review, 58, 1-5
[5] Wolf EJ, Miller MW, Kilpatrick D, Resnick HS, Badour CL, Marx BP, et al. (2015) ICD-11 Complex PTSD in U.S. National and Veteran Samples: Prevalence and Structural Associations With PTSD. Clinical Psychological Science Feb;3:215–229.

11 proposals[6]. Prior to this study, the ITQ had never been applied to a military population.

4.3 Aims and components of this study

Considering the knowledge gaps identified above, this project has three aims:

A. To determine whether the ITQ is a valid and reliable measure of CPTSD in military personnel.

B. To explore differences between PTSD and CPTSD with regard to risk factors and comorbidity with other disorders.

C. To explore the support needs and experiences of veterans with CPTSD.

In chapter A the ITQ measure was examined in a sample of UK veterans who were utilising mental health services. We explored whether the patterns of symptoms in these veterans supported the distinction between PTSD and CPTSD, and assessed the proportions of each of these diagnoses in this treatment-seeking veteran population.

In chapter B, the same sample of UK treatment-seeking veterans completed a range of measures of life experiences, functioning in daily life, and mental health. From these data we determined risk factors for PTSD and CPTSD, and which other mental health difficulties were associated with PTSD and CPTSD.

Chapter C contains the findings from a series of interviews of treatment-seeking veterans. We investigated how UK veterans with CPTSD engage with mental health services, the barriers which deter them from seeking treatment, and difficulties they encounter when accessing treatment.

Each chapter addresses separate aims with different samples and methodologies. A summary of conclusions and implications for training, practice and research from all these three studies is presented collectively in the final sections.

[6] Cloitre, M., Shevlin, M., Brewin, C. R., Bisson, J., Roberts, N., Maercker, A. et al. (2018). The International Trauma Questionnaire: development of a self-report measure of ICD-11 PTSD and complex PTSD. Acta Psychiatrica Scandinavica, 138(6), 536-546.

CHAPTER SUMMARY

Chapter	Aims	Data collected	Analytical method
A	Validation of the ITQ and measurement of prevalence of CPTSD	▪ International Trauma Questionnaire	Quantitative
B	Risk factors and comorbidity of PTSD and CPTSD	▪ Expressions of Moral Injury Scale ▪ Revised Life Events Checklist ▪ Sleep Condition Indicator ▪ Dissociative Symptoms Scale ▪ Childhood Trauma Questionnaire	Quantitative
C	Explore experiences of treatment-seeking veterans with CPTSD	▪ Participant feedback via semi-structured interviews	Qualitative

5.0 Chapter A: validation of the ITQ in a veteran population

5.1 Background

The rates of PTSD in UK veterans deployed to the conflicts in Afghanistan and Iraq is higher than those who did not deploy, particularly for those who deployed in combat roles where 17% report symptoms suggestive of probable PTSD[7]. Findings are comparable in Canadian, Australian and US military personnel involved in similar deployments[8,9,10]. This is of particular importance since there is an international body of evidence showing that veterans with PTSD show a great deal of variation in how they respond to treatment[11,12], and have poorer responses to treatments than members of the general public[13,14]. Poorer treatment has been found to be associated with severity of PTSD presentations, comorbid mental difficulties, childhood adversity, and dissociation[15,16,17,18]. Taken together, a one size fits all approach to understanding PTSD may not be adequate and there is a need to better understand the complexity of PTSD presentations in military and other trauma populations.

As described in 4.1 above, the latest version of the ICD-11, released in 2018 and due to be implemented in January 2022, includes a new

[7] Stevelink, S., Jones, M., Hull, L., Pernet, D., MacCrimmon, S., Goodwin, L. et al. (2018). Mental health outcomes at the end of the British involvement in the Iraq and Afghanistan conflicts: a cohort study. British Journal of Psychiatry, 0, 1-8.
[8] Van Hooff, M., Forbes, D., Lawrence-Wood, E., Hodson, S., Sadler, N., Benassi, H. et al. (2018). Mental Health Prevalence and Pathways to Care Summary Report, Mental Health and Wellbeing Transition Study. Canberra: The Department of Defence and the Department of Veterans' Affairs.
[9] Hoge, C., Riviere, L. A., Wilk, J., Herrell, R., & Weather, F. W. (2014). The prevalence of post-traumatic stress disorder (PTSD) in US combat soldiers: a head-to-head comparison of DSM-5 versus DSM-IV-TR symptom criteria with the PTSD checklist. Lancet Psychiatry, 1(4), 494-505.
[10] Thompson, J., VanTil, L., Zamorski, M., Garber, B., Sanela, D., Fikretoglu, D. et al. (2016). Mental health of Canadian Armed Forces Veterans: review of population studies. Journal of Military. Veteran and Family Health, 2(1), 51-61.
[11] Currier, J., Holland, J., Drescher, K., & Elhai, J. (2014). Residential treatment for combat-related posttraumatic stress disorder: identifying trajectories of change and predictors of treatment response. PLoS ONE, 9(7), e101741.
[12] Phelps, A., Steel, Z., Metcalf, O., Alkemade, N., Kerr, K., O'Donnell, M. et al. (2018). Key patterns and predictors of response to treatment for military veterans with post-traumatic stress disorder: a growth mixture modelling approach. Psychological Medicine, 48(1), 95-103.
[13] Kitchiner, N., Roberts, N., Wilcox, D., & Bisson, J. (2012). Systematic review and meta-analysis of psychosocial interventions for veterans of the military. European Journal of Psychotraumatology, 3, 19267
[14] Bisson, J., Roberts, N., Andrew, M., Cooper, R., & Lewis, C. (2013). Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults (12). Cochrane Database of Systemic Reviews.
[15] Richardson, D., Contractor, A., Armour, C., St Cyr, K., Elhai, J., & Sareen, J. (2014). Predictors of long-term treatment outcome in combat and peacekeeping veterans with military-related PTSD. The Journal of Clinical Psychiatry, 75(11), 1299-1305.
[16] Murphy, D., & Busuttil, W. (2015). Exploring factors that predict treatment outcomes in UK veterans treated for PTSD. Psychology Research, 5(8), 441-451.
[17] Murphy, D., & Smith, K. (2018). Treatment efficacy for UK veterans with posttraumatic stress disorder: latent class trajectories of treatment response and their predictors. Journal of Traumatic Stress, 31, 753-763.
[18] Phelps, A., Steel, Z., Metcalf, O., Alkemade, N., Kerr, K., O'Donnell, M. et al. (2018). Key patterns and predictors of response to treatment for military veterans with post-traumatic stress disorder: a growth mixture modelling approach. Psychological Medicine, 48(1), 95-103.

definition of 'Complex PTSD' (CPTSD)[19]. The International Trauma Questionnaire (ITQ) is the only validated measure for the assessment of ICD-11 PTSD and CPTSD[20]. Using the ITQ, initial population-based studies suggest that CPTSD is a more common condition than PTSD. For example, in the US, 7.2% of adults were found to have either ICD-11 PTSD (3.4%) or CPTSD (3.8%)[21]. This overall prevalence is similar to that reported by the National Comorbidity Survey using DSM-based PTSD criteria (which does not distinguish between PTSD and CPTSD – see 4.1 above) (6.8%)[22] and its subsequent replication (7.8%)[23]. In a study of a trauma-exposed sample in the UK, it was also found that 5.3% met the diagnostic criteria for PTSD and 12.9% for CPTSD[24]. Preliminary evidence also suggests that CPTSD is a more common condition than PTSD among those who seek treatment. In one study of treatment-seeking adults, 76% met diagnostic criteria for CPTSD versus 24% for PTSD[25].

Understanding the prevalence and patterns of CPTSD within veteran populations may help with both the identification of individuals who might be less likely to respond to standard treatments for PTSD, and with stimulating a search for better treatments for CPTSD.

This study in this chapter had two primary aims:

1. Validate the ITQ as a measure distinguishing between PTSD and CPTSD
2. Explore the prevalence of PTSD and CPTSD in a nationally representative study of treatment-seeking veterans in the UK.

[19] World Health Organization. (2018). International statistical classification of diseases and related health problems (11th Revision). Retrieved May 25, 2019.
[20] Cloitre, M., Shevlin, M., Brewin, C. R., Bisson, J., Roberts, N., Maercker, A. et al. (2018). The International Trauma Questionnaire: development of a self-report measure of ICD-11 PTSD and complex PTSD. Acta Psychiatrica Scandinavica, 138(6), 536-546
[21] Cloitre, M., Hyland, P., Bisson, J., Brewin, C. R., Roberts, N., Karatzias, T. et al. (2019). ICD-11 PTSD and Complex PTSD in the United States: A population-based study. Journal of Traumatic Stress. In press.
[22] Kessler, R. C., Davis, C., & Kendler, K. (1997). Childhood adversity and adult psychiatric disorder in the US National Comorbidity Survey. Psychological Medicine, 27(5), 1101-1119.
[23] Kessler, R. C., Chiu, W., Demler, O., Merikangas, K., & Walter, E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Archives of General Psychiatry, 62(6), 617-627.
[24] Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M. et al. (2019). Psychological Interventions for ICD-11 Complex PTSD symptoms: systematic review and meta-analysis. Psychological Medicine, In Press.
[25] Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthymiadou, E., Wilson, D. et al. (2016). Evidence of Distinct Profiles of Posttraumatic Stress Disorder (PTSD) and Complex Posttraumatic Stress Disorder (CPTSD) based on the New ICD-11 Trauma Questionnaire (ICD-TQ). Journal of Affective Disorders, 207, 181-187

5.2 Methods

This study utilised a sample of 177 UK veterans recruited from Combat Stress, a UK charity offering mental health treatments for veterans. Participants filled the ITQ, a questionnaire containing (a) three items diagnosing PTSD, (b) three items on functional impairment (the degree to which the individual's daily activities are affected by their health difficulties), and (c) the "disturbances in self-organization" (DSO) symptoms which diagnose CPTSD. With these data we analysed:

1. Whether the distinct symptom groupings of ICD-11 PTSD and CPTSD correspond with how these symptoms manifest in UK veterans; and
2. The prevalence of PTSD and CPTSD in the sample.

Full methodological details can be found in Appendix 2 (section 12.1).

5.3 Does ITQ appropriately measure PTSD and CPTSD?

To determine whether the ITQ is an appropriate measure following ICD-11 formulation of distinct PTSD and CPTSD diagnoses, a series of potential statistical models were compared using the responses given by this sample, including a model following ICD-11 proposals for distinct diagnoses and a model treating all symptoms as part of a single disorder. This analysis confirmed that the ICD-11 proposals are the best fit for available data collected using the ITQ in this population (for full details see Appendix 2, table 12.2 and ensuing discussion).

The mean scores and endorsement rates of the ITQ items were all very high (Figure 5.1; see Appendix 2, table 12.2 for details), with being on guard and being jumpy or easily startled having the highest score and frequency of endorsement.

5.4 What are PTSD and CPTSD rates in this treatment-seeking sample of veterans?

When ITQ diagnostic rules were applied, the prevalence rates were 57% for CPTSD and 14% for PTSD (Figure 5.2), with the remainder not qualifying for either disorder.

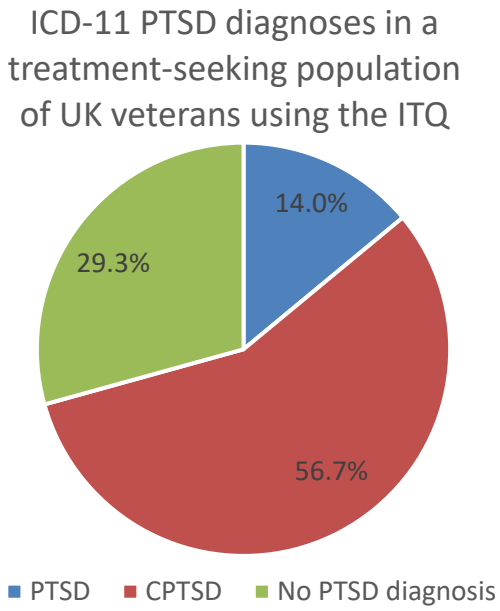

FIGURE 5.2 PROPORTIONS OF PTSD AND CPTSD DIAGNOSES

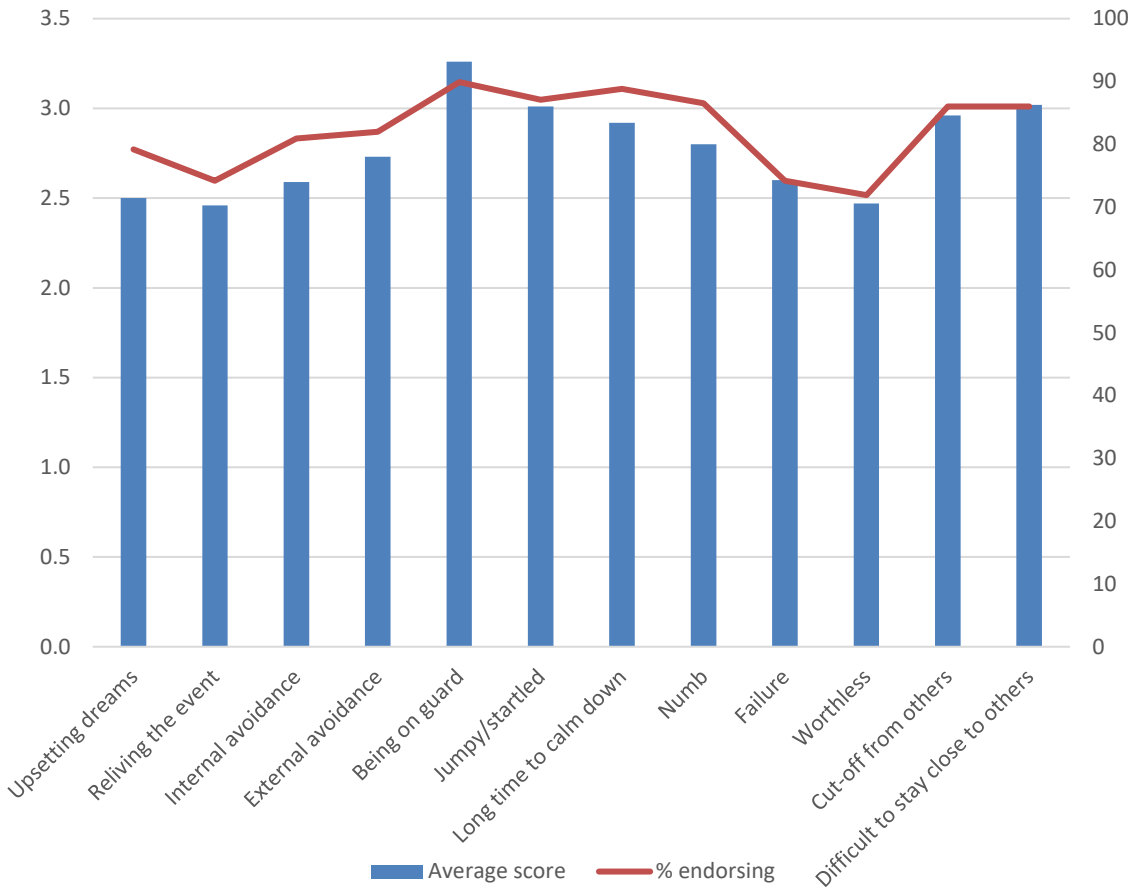

FIGURE 5.1 SCORES AND PROPORTIONS ENDORSING ITQ QUESTIONNAIRE ITEMS

5.5 Discussion

We assessed for the first time the structure of the ITQ in a sample of UK treatment-seeking veterans. Our results indicated that treating PTSD and DSO as distinct domains was the most appropriate statistical model, providing evidence for two separate conditions: PTSD and CPTSD. The ITQ was able to adequately distinguish between PTSD and CPTSD, in line with previous research in clinical and general populations [26]. Findings are consistent with findings from other multiply exposed groups;

[26] Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthymiadou, E., Wilson, D. et al. (2016). Evidence of Distinct Profiles of Posttraumatic Stress Disorder (PTSD) and Complex Posttraumatic Stress Disorder (CPTSD) based on the New ICD-11 Trauma Questionnaire (ICD-TQ). Journal of Affective Disorders, 207, 181-187

such as refugees[27], war exposed youths[28] and victims of interpersonal trauma[29].

The second aim was to estimate the prevalence of PTSD and CPTSD; we found that CPTSD is a more common condition than PTSD, as has previously been reported in other clinical populations and the general public[26,30].

Considering this finding that CPTSD was more common than PTSD, we recommend routine assessment of CPTSD amongst help-seeking military personnel. We also conclude that there is a need to develop appropriate interventions for veterans with CPTSD[28] and not rely on existing PTSD interventions given the presence of two disorders (PTSD and CPTSD) rather than just one, each with different patterns of symptoms.

Looking at the pattern of symptoms reported by participants may provide important information as to how best support this population. The two most frequently endorsed PTSD symptoms were 'being on guard' and feeling 'jumpy/easily startled' (Figure 5.1); it may be beneficial for PTSD treatments to focus on these symptoms explicitly rather than simply the re-experiencing symptoms that are typically the target for current recommended psychological therapy (e.g. prolonged exposure or trauma-focused CBT). Similarly, the two highest-scoring symptoms unique to CPTSD were feeling 'cut-off from others' and finding it 'difficult to stay close to others' (Figure 5.1); these symptoms appear similar to the DSM-5 PTSD symptoms of 'detachment' and 'diminished interest' that have previously been shown to be associated with greater levels of functional impairment in veterans with PTSD[31]. Again, this could imply the need to specifically target these symptoms during treatment.

Overall, we conclude it is time to move away from attempting to treat PTSD and CPTSD with the same treatment models and consider how best to develop novel ways support individuals meeting criteria for CPTSD.

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[27] Vallieres, F., Ceannt, R., Daccache, F., Abou Daher, R., Sleiman, J., Gilmore, B. et al. (2018). ICD-11 PTSD and complex PTSD amongst Syrian refugees in Lebanon: the factor structure and the clinical utility of the International Trauma Questionnaire. Acta Psychiatrica Scandinavica, 138(6), 547-557.

[28] Murphy, S., Elkit, A., Dokkedahl, S., & Shevlin, M. (2016). Testing the validity of the proposed ICD-11 PTSD and complex PTSD criteria using a sample from Northern Uganda. European Journal of Psychotraumatology, 7(1).

[29] Hyland, P., Shevlin, M., Brewin, C. R., Cloitre, M., Downes, A., Jumbe, S. et al. (2017). Factorial and discriminant validity of ICD-11 PTSD and CPTSD using the new International Trauma Questionnaire. Acta Psychiatrica Scandinavica, 136, 231-338.

[30] Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M. et al. (2019). Psychological Interventions for ICD-11 Complex PTSD symptoms: systematic review and meta-analysis. Psychological Medicine, In Press.

[31] Ross, J., Murphy, D., & Armour, C. (2018). A network analysis of posttraumatic stress disorder and functional impairment in UK treatment-seeking veterans. Journal of Anxiety Disorders, 57, 7-15.

5.6 Limitations

This study benefited from sampling from a nationally representative study of treatment seeking veterans. However, there are a number of limitations.

Firstly, only treatment-seeking veterans were included in the study. Evidence suggests that severity of mental health symptoms, and PTSD in particular, can be a barrier for veterans engaging support [32, 33]. Those with more complex presentations may therefore be underrepresented in the sample as they are unlikely to have sought support, which might have resulted in under-estimating the prevalence of CPTSD. Secondly, the sample size for the current study (n=177) was modest, limiting the statistical conclusions which could be reached. Thirdly, the majority of the participants met criteria for either PTSD or CPTSD. This is not surprising given that this was a clinical population, but means that we are limited in how much we can extrapolate these findings to the general population of veterans.

Nonetheless, the charity from which the sample was drawn receives a substantial number of referrals annually and is a recognised treatment pathway for the statutory services offered in the UK. Further, previous research has shown close similarities, in terms of demographic characteristics and mental health presentations, between the population accessing this charity and that of other help-seeking veterans from NATO allies, which would suggest that the population is not unique to this particular charity[34].

CHAPTER A: KEY FINDINGS

- The ITQ is an appropriate measure for CPTSD and PTSD as distinct mental disorders.
- CPTSD is a more common condition in this sample of UK veterans:
  - 57% suffered from CPTSD;
  - 14% suffered from PTSD.
- There is a need to explore both new treatments and the effectiveness of existing treatments for CPTSD in military personnel.

[32] Stevelink, S., Jones, N., Jones, M., Dyball, D., Khera, C., Murphy, D. et al. (2019). Do serving and ex-serving personnel of the UK armed forces seek help for perceived stress, emotional or mental health problems? European Journal of Psychotraumatology, 10(1).

[33] Iversen, A. C., van, S. L., Hughes, J. H., Greenberg, N., Hotopf, M., Rona, R. J. et al. (2011). The stigma of mental health problems and other barriers to care in the UK Armed Forces. BMC Health Services Research, 11, 31.

[34] Murphy, D., Howard, A., Forbes, D., Busuttil, W., & Phelps, A. (2019). Comparing the profiles of UK and Australian military veterans supported by national treatment programmes for post-traumatic stress disorder (PTSD). Journal of the Royal Army Medical Corps, http://dx.doi.org/10.1136/jramc-2019-001268.

6.0 Chapter B: Risk factors and comorbidity of PTSD and CPTSD

6.1 Background

Many different traumatic stressors have been reported in relation to post-traumatic mental health disorders[35]. One study combined data from 26 population-based mental health surveys and reported that a range of pre-trauma demographic factors *increased* the risk of PTSD, including being female, younger age, low education/income, and not being married[36]. By contrast, post-trauma factors such as social support and help-seeking *reduce* the risk of PTSD[37].

Research has shown that many risk factors for combat-related PTSD among military personnel and veterans were largely consistent with those risk factors for PTSD from general population studies (e.g. female, low education, experiencing prior trauma). Military-specific factors included the nature of the military role (e.g. being non-officer) and combat experience (e.g. greater combat exposure, more deployments, longer length of deployments), and post-trauma variables (e.g. post-deployment social support)[38]. CPTSD-specific studies have found that multiple exposure to trauma and childhood trauma were both significant risk factors for CPTSD[39], as well as high rates of pre-service adversity[40].

Studies also show that there is a high level of other disorders associated with a PTSD diagnosis. For example, a study in a civilian sample found that 88.3% of men and 79.0% of women with PTSD met the diagnostic criteria for *at least one* other disorder, and 59% of men and 44% of women met the diagnostic criteria for *three or more* disorders[41]. Similar rates of comorbidity were found in the US military: 83.3% with a single comorbid psychological disorder, and 62.2% comorbid with three psychological disorders[42]. Depression, adjustment disorder, generalized anxiety disorder, and alcohol use disorder were the

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[35] Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., & et al. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. European Journal of Psychotraumatology, 8(5).

[36] Koenen, K., Ratanatharathron, A., McLaughlin, K., & et al. (2019). Posttraumatic stress disorder in the world mental health surveys. Psychological Medicine, 47(13), 2260-2274.

[37] Bisson, J., & Andrew, M. (2007). Psychological treatment of post-traumatic stress disorder (PTSD). Cochrane Database of Systematic Reviews

[38] Xue, C., Ge, Y., Tang, B., Liu, Y., Kang, P., Wang, M. et al. (2015). A meta-analysis of risk factors for combat-related PTSD among military personnel and veterans. PLoS ONE, 10(3).

[39] Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthymiadou, E., Wilson, D. et al. (2016). Evidence of Distinct Profiles of Posttraumatic Stress Disorder (PTSD) and Complex Posttraumatic Stress Disorder (CPTSD) based on the New ICD-11 Trauma Questionnaire (ICD-TQ). Journal of Affective Disorders, 207, 181-187.

[40] Murphy, D., Ashwick, R., Palmer, E., & Busuttil, W. (2017). Describing the profile of a population of UK veterans seeking support for mental health difficulties. Journal of Mental Health, 6, 1-8.

[41] Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. Archives of General Psychiatry, 52(12), 1048-1060.

[42] Walter, K., Levine, J., Highfill-McRoy, R., Navarro, M., & Thomsen, C. (2018). Prevalence of posttraumatic stress disorder and psychological comorbidities among US active duty service members, 2006–2013. Journal of Traumatic Stress.22(1)()(pp 11-19), 2009.Date of Publication: 2009., 31(6), 837-844.

most common comorbidities associated with PTSD in this study.

Research exploring treatment outcomes in veterans with PTSD suggests that, as well as affecting the severity of symptoms, the presence of childhood adversity, comorbid depression, feelings of shame or guilt, dissociation, and higher rates of emotional dysregulation are associated with poor treatment response[43,44,45,46,47].

Military personnel can be at greater risk for CPTSD; this disorder "…typically follows severe stressors of a prolonged nature or multiple or repeated adverse events from which separation is not possible"[48], and studies have shown that UK military personnel experienced multiple and severe operational exposures during deployment[49,50]. Such exposures are in a context where 'separation', or escape, is not possible. In addition, high levels of childhood adversity including childhood adversity relating to family relationships have previously been reported in large samples of the UK armed forces [51] . Therefore, many military personnel are likely to have been exposed to chronic, and varied forms, of trauma exposure that have been shown to be uniquely associated with CPTSD[52].

Evidence from non-military clinical samples also suggests that CPTSD is a highly comorbid condition and it is more likely associated with depression, borderline personality disorder,

[43] Phelps, A., Steel, Z., Metcalf, O., Alkemade, N., Kerr, K., O'Donnell, M. et al. (2018). Key patterns and predictors of response to treatment for military veterans with post-traumatic stress disorder: a growth mixture modelling approach. Psychological Medicine, 48(1), 95-103.
[44] Currier, J., Holland, J., Drescher, K., & Elhai, J. (2014). Residential treatment for combat-related posttraumatic stress disorder: identifying trajectories of change and predictors of treatment response. PLoS ONE, 9(7), e101741
[45] Richardson, D., Eihai, J., & Sareen, J. (2011). Predictors of treatment response in Canadian combat and peacekeeping veterans with military-related PTSD. Journal of Nervous and Mental Disease, 199(9), 639-645.
[46] Murphy, D., & Smith, K. (2018). Treatment efficacy for UK veterans with posttraumatic stress disorder: latent class trajectories of treatment response and their predictors. Journal of Traumatic Stress.22(1)()(pp 11-19)
[47] Murphy, D., & Busuttil, W. (2015). Exploring factors that predict treatment outcomes in UK veterans treated for PTSD. Psychology Research, 5(8), 441-451.
[48] Maercker, A., Brewin, C. R., Bryant, R., Cloitre, M., Ommeren, M., Jones, L. et al. (2013). Diagnosis and classification of disorders specifically associated with stress: proposals for ICD-11. World Psychiatry, 12(3), 198-206.
[49] Osório, C., Jones, N., Jones, E., Robbins, S., Greenberg, N. et al. (2018). Combat experiences and their relationship to post-traumatic stress disorder symptom clusters in UK military personnel deployed to Afghanistan. Behavioral Medicine, 44(2), 131-140.
[50] MacManus, D., Jones, N., Wessely, S., Fear, N., Jones, E., & Greenberg, N. (2014). The mental health of the UK Armed Forces in the 21st century: resilience in the face of adversity. Journal of the Royal Army Medical Corps, 160(2), 125-130.
[51] Iversen, A., Fear, N., Simonoff, E., Hull, L., Horn, O., Greenberg, N. et al. (2007). Influence of childhood adversity on health among male UK military personnel. British Journal of Psychiatry, 191, 506-511.
[52] Hyland, P., Murphy.J., Shevlin, M., Vallières, F., McElroy, E., Elkit, A. et al. (2017a). Variation in post-traumatic response: the role of trauma type in predicting ICD-11 PTSD and CPTSD symptoms. Social Psychiatry and Psychiatric Epidemiology, 52(6), 27-737.

and dissociation[53]. In one population-based study involving trauma exposed individuals in the UK, it was found that those with CPTSD were more likely to endorse symptoms reflecting Major Depressive Disorder and Generalized Anxiety Disorder compared to those with PTSD[54].

Given that veterans appear to benefit less than the public from current standard treatments for PTSD, and given that there is emerging evidence to suggest significantly higher rates of CPTSD compared to PTSD for those veterans who seek support, it seems imperative to elucidate some of the reasons for why this may be. One explanation could be that current exposure treatments offered to military personnel with PTSD may be less effective for CPTSD[55]. However, at present there is little research exploring in detail the differences in presentations between veterans meeting criteria for PTSD and CPTSD. Understanding these differences could be important when developing new interventions to support veterans with CPTSD.

There are currently no studies on the risk factors and comorbidities of ICD-11 PTSD and CPTSD in the military. The aims of this chapter are:

1. to determine the extent to which demographic (age, gender, relationships status, employment), military (combat role, military related bullying, age joining military, early leaver status), delayed treatment seeking, and childhood trauma, predict PTSD and CPTSD; and
2. to assess if CPTSD was associated with higher levels of comorbidity compared to PTSD, as assessed using a range of clinical and psychological variables.

[53] Hyland, P., Shevlin, M., Brewin, C. R., Cloitre, M., Downes, A., Jumbe, S. et al. (2017b). Factorial and discriminant validity of ICD-11 PTSD and CPTSD using the new International Trauma Questionnaire. Acta Psychiatrica Scandinavica, 136, 231-338.
[54] Karatzias, T., Hyland, P., Bradley, M., Cloitre, M., Roberts, N., Bisson, J. et al. (2019b). Risk-factors and comorbidity of ICD-11 PTSD and Complex PTSD: Findings from a trauma-exposed population based sample of adults in the United Kingdom. Depression and Anxiety, In press.
[55] Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M. et al. (2019c). Psychological Interventions for ICD-11 Complex PTSD symptoms: systematic review and meta-analysis. Psychological Medicine, In Press.

6.2 Methods

The same 177 participants were used in this study as in Chapter A. These participants had provided information on demographic variables, military characteristics, and childhood adversity. They also provided information on a range of psychological difficulties including childhood trauma, trauma from life events, anxiety, depression, anger, alcohol use, functional impairment, sleep problems, dissociation, social connectedness, and moral injury (psychological stress due to violations of a person's moral or ethical code); for full details see Appendix 3, section 13.1, and the questionnaires in section 11.

6.3 Factors for PTSD and CPTSD

Most participants were male (95.1%), aged 45 years old or above (78.5%), currently in a relationship (66.3%) and not in employment (72.0%) (see Table 13.1 in Appendix 3, section 13.2). Most had served in the Army (86.5%), had deployed at least once (90.7%) and were in receipt of a war pension (60.8%) (see Table 13.2 in Appendix 3, section 13.2).

Compared to those who did not meet criteria for PTSD or CPTSD, having a combat role, joining the military when over 18 years of age, and high childhood adversity all significantly increased the likelihood of CPTSD. Waiting 5 years or more before contacting the service significantly increased the likelihood of PTSD, but no other factor was statistically significant (Figure 6.1 below; for full details see Tables 13.3 and 13.4 in Appendix 3).

6.4 CPTSD/PTSD and childhood and life events trauma

We compared scores on the childhood and life events measures with scores for PTSD items, DSO items, and total ITQ scores. When considering each diagnostic domain separately, there was evidence that PTSD was associated with physical neglect and sexual abuse whereas DSO was not; conversely DSO symptoms were associated with physical abuse whereas PTSD symptoms were not. PTSD and DSO were both significantly associated with emotional abuse and emotional neglect. Both PTSD and DSO were associated with childhood and adult trauma measured by the Life Events Checklist, and total ITQ scores were positively and significantly correlated with all trauma related variables (Table 6.1 below; for full details see Table 13.5 in Appendix 3).

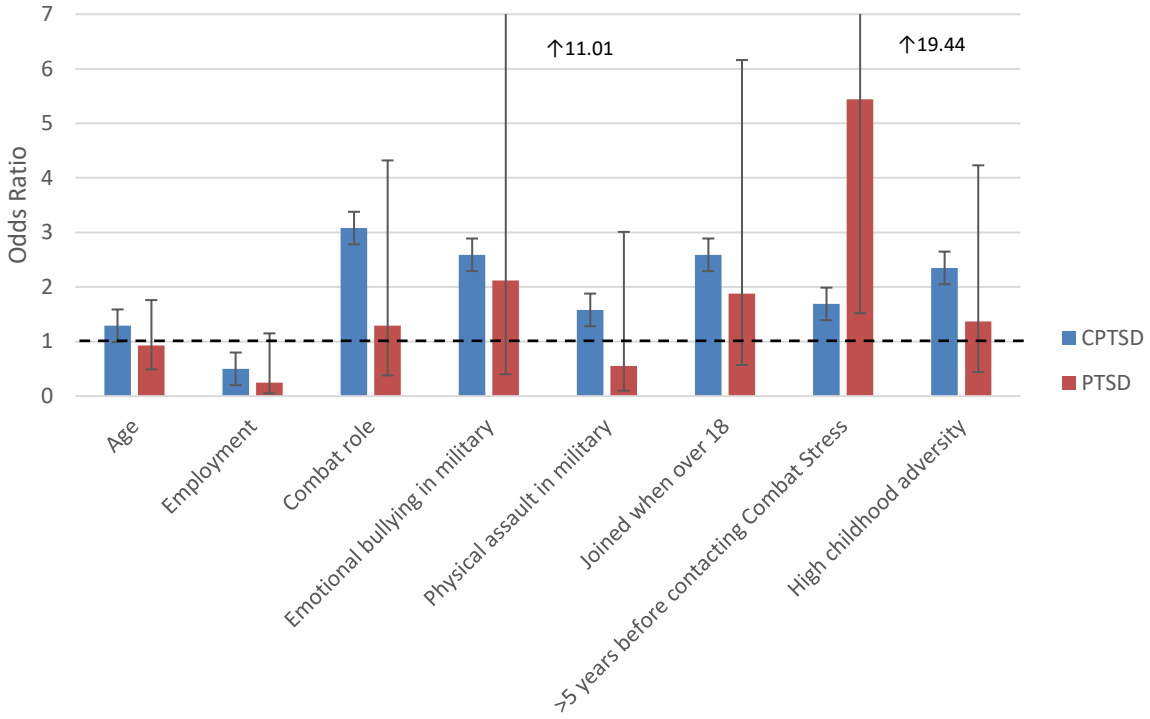

FIGURE 6.1 ASSOCIATIONS BETWEEN SOCIODEMOGRAPHIC AND MILITARY FACTORS AND CPTSD/PTSD

(Factors are significant where error bars representing 95% confidence intervals do not cross 1)

TABLE 6.1 CORRELATIONS BETWEEN ITQ AND TRAUMA MEASURES

	Emotional Abuse	Physical Abuse	Emotional Neglect	Physical Neglect	Sexual Abuse	LEC Adult	LEC Child
PTSD	✓✓	✗	✓	✓	✓	✓✓	✓✓
DSO	✓✓✓	✓✓	✓✓	✗	✗	✓✓	✓✓✓
Total ITQ	✓✓✓	✓✓	✓✓✓	✓	✓	✓✓✓	✓✓✓

Statistical significance: ✓ p<0.05 ✓✓ p<0.01 ✓✓✓ p<0.001 ✗ not significant

(p-value indicates likelihood that observed correlation is merely due to chance)

We also observed that the participants in this study reported exposure to multiple traumatic events (mean=2.6 and 7.6 events in childhood and adulthood, respectively). The most commonly reported traumas during childhood were 'Physical assault' (51.2%), 'Sudden, unexpected death of someone close to you' (30.2%), and 'Other unwanted or uncomfortable sexual experience (17.5%)'. During adulthood the most commonly

reported traumas were 'Combat or exposure to a war-zone' (86.4%), 'Fire or explosion' (79.2%), and 'Sudden, unexpected death of someone close to you' (78.6%). Overall, low to moderate trauma exposure was reported across a range of domains: emotional abuse, physical abuse, emotional neglect, physical neglect and sexual abuse.

6.5 Comorbidity of CPTSD and PTSD

Analysis of a range of psychological measures found that participants with CPTSD scored higher for all measures (loneliness, sleep problems, dissociation, functioning, moral injury, anger and depression/anxiety) compared with both PTSD-affected participants and those who were not affected by either disorder. The exception was alcohol use, which did not differ significantly between CPTSD, PTSD, and 'neither disorder' groups.

6.6 Discussion

Sociodemographic risk factors for CPTSD identified in this study of a UK veteran sample are similar to those found in previous research on the general population: results showed that participants with CPTSD were younger and took longer to seek help than those with either PTSD or no PTSD. In addition, those with CPTSD reported higher rates of childhood adversity and being more likely to have been the victim of emotional or physical bullying during their military careers. The relationship between childhood adversity and CPTSD replicates findings observed in non-military samples[56].

Exposure to multiple traumas is commonly associated with CPTSD[57]; in line with previous research [58], reporting exposure to multiple traumas is the norm in this population group, which might partially explain why veterans profit less from PTSD treatments than other populations. Existing standard trauma treatments may not address the impact of multiple and different types of traumatic events[57].

Childhood trauma appeared more strongly associated with CPTSD than PTSD, and different types of traumas were associated with each diagnosis: PTSD (physical neglect and sexual abuse), CPTSD (physical abuse) and both disorders (emotional abuse and emotional neglect). There is evidence that CPTSD symptoms that resulted from childhood

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[56] Karatzias, T., Hyland, P., Bradley, B., Cloitre, M., Bisson, J., Roberts, N. et al. (2019a). Risk factors and comorbidity of ICD-11 PTSD and CPTSD in a nationally representative sample of trauma-exposed adults from the United Kingdom. Depression and Anxiety, 36(9), 877-894.

[57] Murphy, D., Ashwick, R., Palmer, E., & Busuttil, W. (2017). Describing the profile of a population of UK veterans seeking support for mental health difficulties. Journal of Mental Health, 6, 1-8.

[58] Mark, K., Murphy, D., Stevelink, S., & Fear, N. (2019). Rates and Associated Factors of Secondary Mental Health Care Utilisation among Ex-Military Personnel in the United States: A Narrative Review. Healthcare, 7(18).

trauma might benefit less from exposure-based interventions such as CBT and EMDR[59].

A picture also emerged suggesting that those with CPTSD were more likely to report comorbidities. In line with previous findings[60], there appeared to be clear evidence of increased functional impairment (measured using the WSAS) associated with a diagnosis of CPTSD as those individuals with CPTSD were more likely to report feeling socially isolated and lonely as well as reporting higher rates of functional impairment. These findings are in line with findings from non-military clinical samples [61] and general population trauma-exposed samples[62], where CPTSD has also be shown to be a more comorbid condition than PTSD.

In addition, those with CPTSD reported a greater impact for potentially morally injurious events than those with PTSD or no post-traumatic disorder. The findings regarding increased difficulties related to moral injury and CPTSD are intriguing; recent research has demonstrated that reporting moral injuries is more strongly associated with PTSD than a range of other mental health difficulties [63] (note that this study did not differentiate between PTSD and CPTSD). The reason behind the association between CPTSD and moral injury is unclear; however, it has been suggested that moral injury is associated with potentially more complex emotional responses (such as shame and guilt)[64,65] which are also closely related to CPTSD.

Presence of CPTSD risk factors, such as childhood adversity and having served within a combat role, as well as CPTSD comorbidities such as dissociation, anxiety and depression, have been observed to be predictors of poorer treatment outcomes in veteran

[59] Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M. et al. (2019c). Psychological Interventions for ICD-11 Complex PTSD symptoms: systematic review and meta-analysis. Psychological Medicine, In Press.
[60] Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthymiadou, E., Wilson, D. et al. (2016b). An initial psychometric assessment of an ICD-11 based measure of PTSD and complex PTSD (ICD-TQ): Evidence of construct validity. Journal of Anxiety Disorders, 44, 73-79
[61] Hyland, P., Murphy.J., Shevlin, M., Vallières, F., McElroy, E., Elkit, A. et al. (2017a). Variation in post-traumatic response: the role of trauma type in predicting ICD-11 PTSD and CPTSD symptoms. Social Psychiatry and Psychiatric Epidemiology, 52(6), 27-737.
[62] Karatzias, T., Hyland, P., Bradley, M., Cloitre, M., Roberts, N., Bisson, J. et al. (2019b). Risk-factors and comorbidity of ICD-11 PTSD and Complex PTSD: Findings from a trauma-exposed population based sample of adults in the United Kingdom. Depression and Anxiety, In press.
[63] Williamson, V., Stevelink, S., & Greenberg, N. (2018). Occupational moral injury and mental health: systematic review and meta-analysis. British Journal of Psychiatry, 212, 339-346.
[64] Williamson, V., Greenberg, N., & Murphy, D. (2019a). Impact of moral injury on the lives of UK military veterans: a pilot study. Journal of the Royal Army Medical Corps, doi:10.1136/jramc-2019-001243.
[65] Williamson, V., Greenberg, N., & Murphy, D. (2019b). Moral injury in UK armed forces veterans: a qualitative study. European Journal of Psychotraumatology, 10(1).

samples[66,67,68,69,70,71]. It is currently unknown if existing treatments for PTSD are suitable for CPTSD, although one recent review [72] suggested that existing interventions commonly used for PTSD, such as CBT or EMDR, can be less useful for CPTSD symptoms if there is history of childhood trauma. Further work is required to test the effectiveness and acceptability of existing and new interventions for CPTSD in the military.

The current study has important implications for both researchers and clinicians. There is a wealth of data describing the barriers for treatment for veterans with mental health difficulties and also evidence suggesting veterans with PTSD are less likely to seek support than peers with other mental health difficulties[73],[74],[75]. However, for the first time data has been presented that imply that veterans with CPTSD appear to take longer to seek help than those with PTSD. This could lead to an increased erosion of resources (e.g. social support available) for veterans with CPTSD, which could be compounding their difficulties. Alternatively, it could be that PTSD becomes more complex the longer it is left untreated. As such, there appears an argument for early intervention in those with PTSD and that those with more complex PTSD symptoms may need additional support to address the barriers that may be preventing them from seeking help sooner.

This is the first study exploring risk factors and comorbidities of ICD-11 PTSD and CPTSD in the

[66] Phelps, A., Steel, Z., Metcalf, O., Alkemade, N., Kerr, K., O'Donnell, M. et al. (2018). Key patterns and predictors of response to treatment for military veterans with post-traumatic stress disorder: a growth mixture modelling approach. Psychological Medicine, 48(1), 95-103.

[67] Richardson, D., Contractor, A., Armour, C., St Cyr, K., Elhai, J., & Sareen, J. (2014). Predictors of long-term treatment outcome in combat and peacekeeping veterans with military-related PTSD. The Journal of Clinical Psychiatry, 75(11), 1299-1305.

[68] Currier, J., Holland, J., Drescher, K., & Elhai, J. (2014). Residential treatment for combat-related posttraumatic stress disorder: identifying trajectories of change and predictors of treatment response. PLoS ONE, 9(7), e101741.

[69] Murphy, D., & Smith, K. (2018). Treatment efficacy for UK veterans with posttraumatic stress disorder: latent class trajectories of treatment response and their predictors. Journal of Traumatic Stress.22(1)()(pp 11-19), 2009.Date of Publication: 2009., 31, 753-763.

[70] Murphy, D., & Busuttil, W. (2015). Exploring factors that predict treatment outcomes in UK veterans treated for PTSD. Psychology Research, 5(8), 441-451.

[71] Murphy, D., Spencer-Harper, L., Carson, C., Palmer, E., Hill, K., Sorfleet, N. et al. (2016). Long-term responses to treatment in UK veterans with military-related PTSD: an observational study. BMJ Open, 6(e011667).

[72] Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M. et al. (2019c). Psychological Interventions for ICD-11 Complex PTSD symptoms: systematic review and meta-analysis. Psychological Medicine, In Press.

[73] Murphy, D., & Busuttil, W. (2014). Reviewing PTSD, stigma and barriers to help-seeking within the UK Armed Forces. Journal of the Royal Army Medical Corps, 161(4), 322-326.

[74] Iversen, A. C., van, S. L., Hughes, J. H., Greenberg, N., Hotopf, M., Rona, R. J. et al. (2011). The stigma of mental health problems and other barriers to care in the UK Armed Forces. BMC Health Services Research, 11, 31.

[75] Iversen, A. C., van, S. L., Hughes, J. H., Browne, T., Greenberg, N., Hotopf, M. et al. (2010). Help-seeking and receipt of treatment among UK service personnel. British Journal of Psychiatry., 197(3), 149-155.

military. The data presented here suggest that treatment seeking veterans with CPTSD report more severe comorbid health difficulties and a greater impact on functioning than those seeking support for PTSD or other mental health difficulties. As previously stated, further work is needed on testing existing and novel treatments for CPTSD in the military.

6.7 Limitations

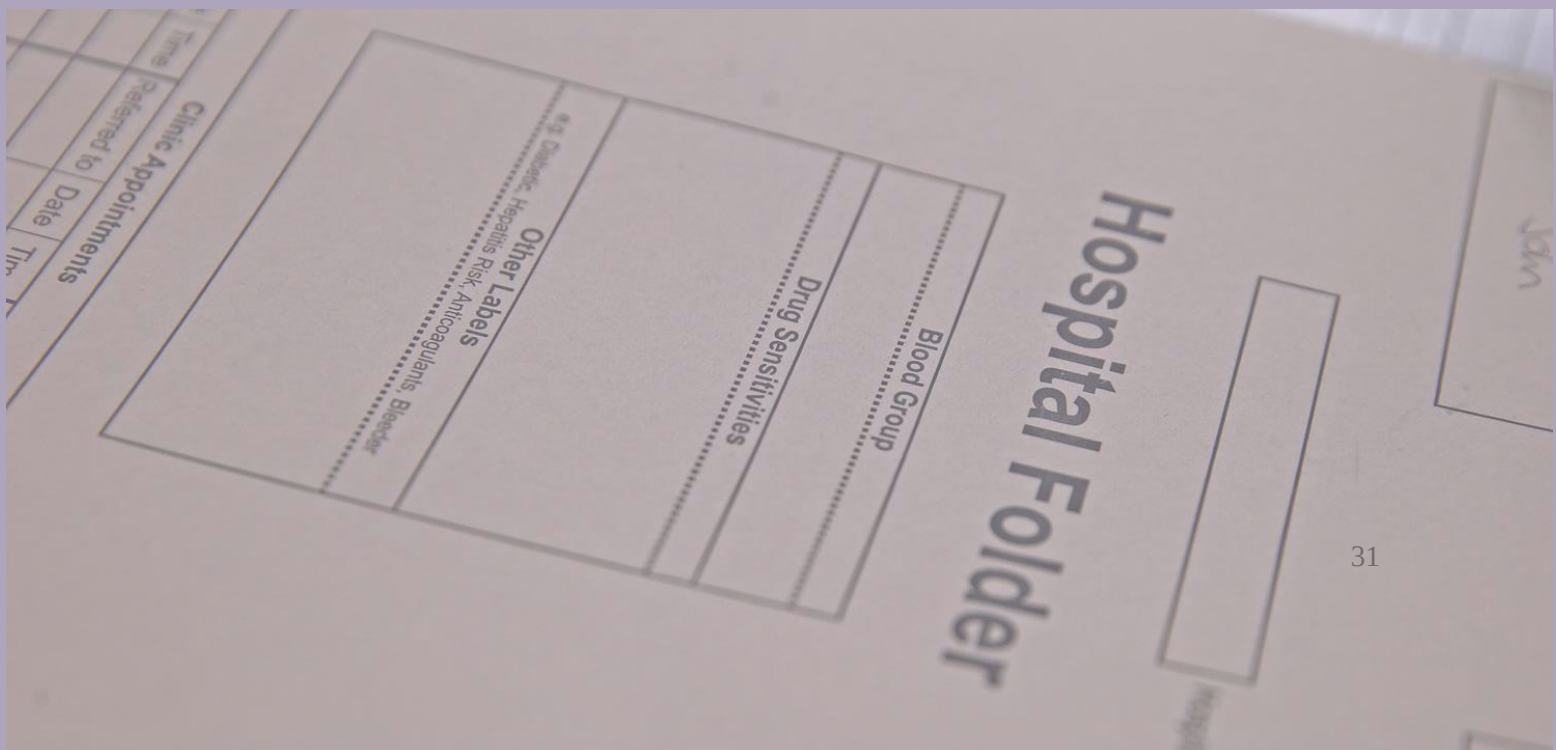
Similar limitations apply to the findings presented in this chapter as in 5.6 (page 19 above). Furthermore, those with CPTSD reported higher rates of both childhood adversity as well as emotional and physical bullying during their military careers. The potential issue of recall bias affecting these findings needs to be considered. It could be that those who are most unwell are also more likely to recall experiencing more examples of adversity during their childhoods and military careers, or conversely, were more likely to fail to recall them due to memory problems associated with PTSD and dissociation. Nevertheless, there is also evidence suggesting that recall of childhood adversities can be considered reliable and it is not influenced by current mental health difficulties[76],[77].

CHAPTER B: KEY FINDINGS

- Compared with PTSD-sufferers, those with CPTSD:
  - Take longer to seek help
  - Report higher rates of childhood adversity
  - Have experienced more emotional and/or physical bullying during their military careers
- CPTSD is associated with more comorbid mental health difficulties including:
  - High levels of dissociation
  - Anger
  - Moral injury
  - Functional impairment
  - General common mental health difficulties
- As CPTSD is generally a more debilitating condition than PTSD, the need to test existing interventions and generate new therapies for CPTSD veterans is urgent.

[76] Robins, L., Schoenberg, S., Holmes, S., Ratcliff, K., Benham, A., & Works, J. (1985). Early home environment and retrospective recall: a test for concordance between siblings with and without psychiatric disorders. American Journal of Orthopsychiatry, 55(1), 27-41.
[77] Wilhelm, K., Niven, H., Parker, G., & Hadzi-Pavlovic, D. (2005). The stability of the parental bonding instrument over a 20-year period. Psychological Medicine, 35(3), 387-393.

7.0 Chapter C: Experiences of service utilisation by veterans with CPTSD



7.1 Background

Veterans have been found to underuse mental health services, with one study showing only half of those who were experiencing mental health problems were accessing medical support[78]. Many barriers to help-seeking and treatment have been found in trauma exposed military samples, including access difficulties (e.g. long waiting times for appointments, difficulty getting time off work) and concerns about mental health-related stigma (e.g. a mental health problem will detrimentally affect one's career or be seen by others as weak)[79]. Military personnel with PTSD have been found to report greater barriers to care and internalised stigma (e.g. feeling 'weak' for having a mental illness) than those with other disorders, such as alcohol misuse[80], with higher levels of PTSD symptoms associated with increased internal stigma[81].

Given the recency of CPTSD as a formal diagnosis, little is known about the experiences of veterans with CPTSD regarding their perceptions of mental health related stigma, barriers to care, and engagement with psychological services. Military populations with PTSD often have relatively high non-response rates to research contact and patient drop out during treatment, and it is possible that it may be those with CPTSD who particularly struggle to access and engage with treatment. Furthermore, whether the barriers to help-seeking reported by veterans with PTSD are similar to those reported by veterans with CPTSD is unclear. It is possible that other barriers are more salient in cases of CPTSD, particularly given the DSO related symptoms. The pervasive psychological disturbances characteristic of CPTSD, such as persistent feelings of worthlessness, heightened emotional reactivity and difficulties sustaining interpersonal relationships, may influence how and when individuals with CPTSD seek formal psychological help. Addressing such barriers may improve access to clinical care and enable recovery. Therefore, the aim of this study was to carry out the first examination of how UK military veterans with CPTSD engage with mental health services and their experiences of barriers to treatment.

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[78] Stevelink, S. A. M., Jones, N., Jones, M., Dyball, D., Khera, C. K., Pernet, D., … Fear, N. T. (2019). Do serving and ex-serving personnel of the UK armed forces seek help for perceived stress, emotional or mental health problems? European Journal of Psychotraumatology, 10(1).

[79] Iversen, A. C., van Staden, L., Hughes, J. H., Greenberg, N., Hotopf, M., Rona, R. J., … Fear, N. T. (2011). The stigma of mental health problems and other barriers to care in the UK Armed Forces. BMC Health Services Research, 11(1), 31.

[80] Williamson, V., Greenberg, N., & Stevelink, S. A. M. (2019). Perceived stigma and barriers to care in UK Armed Forces personnel and veterans with and without probable mental disorders. BMC Psychology, 7(1), 75.

[81] Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat Duty in Iraq and Afghanistan, Mental Health Problems, and Barriers to Care. New England Journal of Medicine, 351(1), 13–22.

7.2 Methods

A group of treatment-seeking veterans with CPTSD from the study described in chapters A and B were recruited to take part in structured interviews regarding their challenges and experiences of help-seeking. Eight veterans in total undertook the interviews, from which common themes were extracted.

7.3 Results

Veterans' experiences fell into three broad categories: experiences of stigma influencing help-seeking, psychological factors influencing help-seeking, and organisational barriers to treatment.

7.4 Experiences of stigma

CPTSD veterans were concerned that they not show emotional weakness, that disclosing a mental health problem would cause others to think less of them and affect their future career (and consequently their family's finances and wellbeing).

> *"As soon as they saw anyone reaching out for any support, their career immediately ended. There's a derogatory term, you're on a biff chit. I was a diver and engineer so if I had been put on any medication or seek any psychological support, I would have lost both"*

When veterans did wish to seek formal help, they described being poorly informed of where to acquire support, which may explain concerns that disclosure of mental health problems would cause them to be sectioned or otherwise "taken away". Seeking support while still in service was not viewed as an option due to concerns regarding anonymity or confidentiality.

> *"I didn't really [seek help]. I knew [my problems] had something to do with the Army… you hear about it. I'll be in the loony bin or I'll get… put away... [get] sectioned or something like that and I was so frightened."*

7.5 Psychological factors

Emotional or psychological factors acting as barriers to treatment were described by the CPTSD veterans, including:

- poor awareness/understanding of PTSD
- feeling unworthy of support
- concerns that disclosing traumatic events would distress clinicians

> *"In my head others deserved it more than me and as far as I was concerned, I was still able to cope. There's people that were far more deserving and injured than me."*

On the other hand, some veterans reported experiences that helped them seek treatment. Contact with other veterans with similar experiences made them feel less alone and helped inform them of available services, while family members (and partners in particular) helped them manage their symptoms and encouraged them to seek care. Nonetheless, as these veterans frequently took

many years to seek treatment, their conditions frequently harmed their families, with several veterans estranged from family members.

"You know, it was only after quite a significant event when I wanted to end my life and I told her that she said right, you know, we need some help. When we went online and saw the combat stress advert."

7.6 Organisational barriers to treatment

Some barriers experienced by veterans were more practical in nature. Services were often overstretched with a long waiting list; if offered treatment, care was sometimes limited and sporadic, and felt to be insufficient for the veterans' needs.

Veterans perceived that exposure to combat trauma produced post-trauma responses that were poorly recognised by GPs, and clinical care teams were dismissive of their difficulties. Veterans had to repeat their reasons for seeking help to different mental health services. When they did receive support, some veterans found it difficult to build rapport with clinicians.

"They are good at what they do, but the lady that I was seeing could only see me once every three or four weeks and she's going to give me a maximum of six sessions because of their funding, so I got six days therapy. About a half an hour a time, this wasn't enough to address my seven traumas".

Nonetheless veterans did identify positive results of treatment:

- Learning coping strategies to manage symptoms
- Understanding that symptoms may never be cured but could be effectively managed
- Receiving advice about support available from veteran organisations

However, veterans felt that they received little follow-up care, and they would have benefited from more regular contact after treatment.

"I went into [redacted] looking for a cure, my psychiatrist said to me, 'Mate there is no cure. We can teach you ways of coping with it, but it will always be there. I can take it away, but I'll take half your life away with it. No happy memories, would you really want that?' And I said, 'No.'"

7.7 Discussion

Despite efforts to reduce the stigma of mental illness and encourage open discussion in both the military and general population [82] , considerable mental health-related stigma and barriers to care continue to exist for those with CPTSD. Veterans with CPTSD held concerns about being perceived as weak for having a psychological problem and felt unworthy of receiving formal treatment. Such internalised stigma beliefs are not uncommon amongst military personnel with mental health difficulties[83], and may be reflective of the DSO symptoms such as negative self-concept and worthlessness that form part of the PTSD diagnosis. Stigma regarding not being seen as tough is concerning as previous studies with Afghanistan and Iraq war veterans have found that higher levels of emotional "toughness" (e.g. over self-reliance, suppression of displays of distress) to be significantly associated with poorer mental health[84].

Concerns that veterans would be sectioned if they came forward highlights potential areas to target in future mental health stigma campaigns; for example, publicising positive patient testimonies that seeking help is a sign of self-awareness, that everyone is entitled to care, and that treatment often does not require inpatient care. Concerns regarding confidentiality suggest that incorporating clearer information about the tenets and limits of confidentiality as a central part of mental health stigma campaigns, as well as making this information more visible on service websites, may potentially be helpful in allaying this concern.

Our results highlight the current lack of resources within mental health services and the resulting disrupted care systems. Our findings illustrate the continued need to ensure that veterans who wish to access care know how to do so, that GP's and other gatekeepers have the appropriate knowledge and skill in the identification, diagnosis and management of individuals with trauma-related mental health difficulties, and that veterans are aware of the psychology services and specialist veteran mental health services in their locality. Government health budgets are increasingly limited and therefore remote or online treatments may be a potential solution to facilitate early access to evidence-based care for those with CPTSD. Cost-effective online treatments have been developed to

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address several mental health problems, including PTSD, alcohol misuse, depression and anxiety[85,86], and the development of a similar frontline approach for CPTSD may be especially beneficial given the pervasive impact CPTSD can have on wellbeing.

Findings that family members were a key source of support were consistent with previous studies that social support is associated with improved outcomes post-trauma, as well as better responses to treatment [87, 88]. However, participating veterans also described that their psychological difficulties, if left untreated for several years, could contribute towards a break down in family relationships, consistent with previous research in both military and civilian families[89]. These results suggest that mental health services must also consider the needs of the veteran's

family unit and ensure that appropriate familial guidance and support is readily available. These results also suggest that early identification and treatment of CPTSD will be beneficial for veterans and relatives.

7.8 Limitations

The sample of eight veterans was small but was sufficient as thematic saturation was reached (i.e. no additional themes emerge). Nonetheless it is possible that the themes which emerged from the qualitative interviews are restricted by the limited demographic diversity of the veteran sample. Future studies could include the perspectives of a wider demographic diversity. Given the qualitative nature of the study, a large-scale quantitative investigation exploring help-seeking patterns in veterans with CPTSD and their experiences of help-seeking and treatment would be useful in determining the generalisability of the findings and how they compare across other clinical settings.

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CHAPTER C: KEY FINDINGS

- Veterans describe a number of barriers to accessing care for PTSD-related issues:
  - Stigma regarding mental health and its treatment
  - Concerns regarding confidentiality and career impact
  - Feeling unworthy of treatment
  - Fear of being sectioned
- Veterans also report problems when undertaking mental health care:
  - Poor recognition of PTSD symptoms by GPs
  - Long waiting lists
  - Limited follow-up after treatment
- Some CPTSD symptoms, particularly negative self-concept, may be a deterrent from seeking help.

These issues should be considered in future initiatives to direct CPTSD-affected veterans to appropriate care.

8.0 Summary of Conclusions

- Preliminary results suggest that the ITQ is a reliable and valid instrument for use with military personnel.

- ICD-11 CPTSD is a more prevalent condition than PTSD in military personnel.

- CPTSD is a highly comorbid condition compared to PTSD and it is associated with poorer functioning.

- History of childhood trauma and combat role are unique risk factors to CPTSD.

- Compared to veterans with PTSD, veterans with CPTSD take longer to access services to address their difficulties.

- Stigma may impair formal help-seeking of those with CPTSD. CPTSD symptoms such as negative self-concept may act as a salient barrier to help-seeking for those with CPTSD.

- Veterans with CPTSD experience relevant services as disjointed with long waiting times and limited follow up care.

- There is limited recognition of CPTSD as a condition from health care practitioners.

- Family support is an important factor in supporting veterans, helping them manage their symptoms and encouraging them to seek care.

- CPTSD is not only a debilitating condition for veterans but it can also have a negative impact on veterans' families.

9.0 Summary of Clinical Implications

- Although further work is required to test the reliability and validity of ITQ in the military, preliminary results suggest that this is a sound measure to be used for the screening of ICD-11 PTSD and CPTSD in this population group.

- As CPTSD is a more prevalent condition than PTSD in the military, routine screening of both conditions is essential for early detection and appropriate intervention.

- Considering that history of both childhood and military trauma are associated with presence of CPTSD, these different types of trauma should be appropriately addressed in treatment rather than focus exclusively on military trauma, irrespective of the reason of referral.

- Clinicians should be acutely aware of the symptom profiles of ICD-11 PTSD and CPTSD, and consider a diagnosis of CPTSD to be especially pertinent in the presence of childhood trauma. We also recommend routine screening of childhood trauma in clinical services that provide interventions to this population group. In line with the results of our study, clinicians should also be cognisant of the fact that history of a combat role can be associated not only with PTSD but also with CPTSD.

- Health care professionals should be aware of the psychology services and specialist veteran mental health services in their locality to appropriately refer veterans with CPTSD.

- Early identification and treatment of CPTSD in veterans might lead to better outcomes for veterans and their families.

- Mental health services need not only to consider the impact of CPTSD on veteran wellbeing but also the needs of their family unit and ensure that appropriate familial guidance and support is readily available.

10.0 Summary of Directions for Further research

- Further research is required on replicating the present findings regarding the reliability and validity of the ITQ in larger and more representative veteran populations.
- Additional research is required on the prevalence of ICD-11 PTSD and CPTSD in population based military samples.
- Future research is required on the course of illness following traumatisation and diagnosis.
- There is a pressing need to develop and test effective interventions for CPTSD in the military.
- Further work is required on why people with CPTSD take longer to access services for support.

11.0 Appendix 1: Study questionnaires, patient information, and other materials

11.1 Questionnaire from original mailout in 2015

About you

1. Age as at today _____ years

2. What is your Relationship Status?

Married/Cohabiting	□[1]	Separated	□[4]
In relationship/not living together	□[2]	Divorced	□[5]
Single	□[3]	Widowed	□[6]

3. Are you currently working?

Full time / part time	□[1]	Not working due to ill health	□[4]
Stay at home parent/caregiver	□[2]	Retired	□[5]
Not working, seeking employment	□[3]	Other	□[6]

4. If you are currently working, could you tell us what your job role is, e.g. teacher, police?

_____

5. What is your height? _____ **& your weight?** _____ (please indicate unit)

About seeking help

6. a) Have you sought help for mental health needs elsewhere (other than Combat Stress)?

Yes □[1] No □[0]

6. b) If yes, what type of service is this mental health support provided by? (tick all that apply)

GP	□	NHS mental health service	□
Private mental health service	□	Charity (not Combat Stress)	□

Other □

If other please state _____

7. Are you currently receiving support from other organisations for any of the following areas?
(tick all that apply)

Financial	□	Occupational	□
Housing	□	Family / relationship	□
Alcohol/drugs	□	N/A	□
Other	□		

If other please state _____

8. To what extent do you feel supported with your mental health needs by: (please circle)

a) Your employer?	N/A	Not at all	A little	Well supported
b) Your family?		Not at all	A little	Well supported
c) Your friends?		Not at all	A little	Well supported

Your physical health

9. Do you have any problems relating to any of the following physical health areas?
(please tick all that apply)

Diabetes	□		
Heart problems, e.g. heart attack, angina	□	Gastro / digestive problems, e.g. gastritis	□
High or low blood pressure	□	Chronic pain	□
Respiratory problems, e.g. asthma, COPD	□	Poor mobility	□
Liver or kidney problems	□	Hearing impairment	□
Amputation of limb(s)	□	Sight impairment	□
Neurological problems, e.g. epilepsy, stroke	□	Communication problems	□
		Other	□
		If other please state:	

Your military history

10. What service were you in?

Royal Navy	□[1]	British Army	□[2]
Royal Air Force	□[3]	Royal Marines	□[4]

11. During your military service, what was your enlistment status?

Regular □[1] Reservist □[2] Regular **and** Reservist □[3]

12. What was your last rank?

Commissioned Officer □[1] Non Commissioned Officer □[2] Other ranks □[3]

13. Which conflicts did you deploy on? (tick all that apply)

Falklands War	□	1991 Gulf War	□	Bosnia	□
Sierra Leone	□	Afghanistan	□	Iraq since 2003	□
Other Conflict/s	□	Northern Ireland	□	Kosovo	□

14. What was your main role during service?

Combat	□[1]	Welfare	□[10]
Medical	□[2]	Military police	□[11]
EOD (bomb disposal)/C-IED-TF	□[3]	Flight operations	□[12]
Logistics/supply	□[4]	Administrative	□[13]
Aircrew	□[5]	Driver	□[14]
Engineering	□[6]	Warfare branch	□[15]
Catering/chef	□[7]	Force protection	□[16]
Intelligence	□[8]	Other	□[17]
Communications	□[9]		

15. a) Year you left service? _____ **b) Total length of your service?**_____*yrs*

16. How did you leave the armed forces?

Voluntary release □[1] Medical □[2] Non voluntary/admin/redundancy □[3]

17. Did you experience any of the following whilst in the military (please circle):

d)	Emotional bullying	Yes	No
e)	Physical assault	Yes	No
f)	Sexual harassment	Yes	No
g)	Sexual assault	Yes	No

Questions about your day-to-day life

18. People's problems sometimes affect their ability to do certain day-to-day tasks in their lives. To rate your problems look at each section and determine on the scale provided how much your problem impairs your ability to carry out the activity. For each question, please circle the number which best applies to you.

Work If you are retired or choose not to work for reasons unrelated to your problem, tick here: ☐ N/A

0	1	2	3	4	5	6	7	8
Not at all		Slightly		Definitely		Markedly		Very Severely

Home Management Cleaning, tidying, shopping, cooking, looking after home/children, paying bills etc

0	1	2	3	4	5	6	7	8
Not at all		Slightly		Definitely		Markedly		Very Severely

Social Leisure Activities With other people, e.g. parties, pubs, outings, entertaining etc.

0	1	2	3	4	5	6	7	8
Not at all		Slightly		Definitely		Markedly		Very Severely

Private Leisure Activities Done alone, e.g. reading, gardening, sewing, hobbies, walking etc.

0	1	2	3	4	5	6	7	8
Not at all		Slightly		Definitely		Markedly		Very Severely

Family/Relationships Form and maintain close relationships with others including the people that I live with

0	1	2	3	4	5	6	7	8
Not at all		Slightly		Definitely		Markedly		Very Severely

19. How well would you say you are managing financially these days? Would you say you are:

Living comfortably □[1]

Doing alright □[2]

Just about getting by □[3]

Finding it quite difficult □[4]

Finding it very difficult □[5]

Questions about your lifestyle

20. Do you currently smoke?

No □[0] Yes □[1]

If yes, how many cigarettes, cigars or roll-ups do you smoke a day? _____

21. Do you drive? Yes □[1] No □[0]

If yes, please answer questions 22 and 23:

22. When you are driving in a built up area, how close to the speed limit do you usually drive?

Within 5mph □[1] 6-10mph above the limit □[2] More than 10mph above the limit □[3]

23. When you are driving on a motorway, how close to the speed limit do you usually drive?

Within 10mph □[1] 11-20mph above the limit □[2] More than 20mph above the limit □[3]

Questions about your lifestyle (contd.)

24. Circle the option that best represents your answer to each question over the past month:

	0	1	2	3	4
How often do you have a drink containing alcohol	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 or 8	10 or more
How often do you have six or more drinks in once occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often in the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often in the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often in the last year have you had a feeling of guilt or remorse after drinking	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often in the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily

	0	2	4
Have you or someone else been injured because of your drinking?	No	Yes, but not in the last year	Yes, during the last year

Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year
Have you ever felt you should cut down on your drinking?	1 Yes			0 No	
How often do you use non-prescription drugs other than alcohol?	0 Never	1 Once a month or less often	2 2-4 times a month	3 2-3 times a week	4 4 or more times a week

Questions about symptoms relating to stressful experiences

25. Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to indicate how much you have been bothered by that problem <u>in the past month</u>.

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
Suddenly feeling or acting as if the stressful experience were actually happening again *(as if you were actually back there reliving it)*?	0	1	2	3	4
Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
Having strong physical reactions when something reminded you of the stressful experience *(for example, heart pounding, trouble breathing, sweating)*?	0	1	2	3	4
Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
Avoiding external reminders of the stressful experience *(for example, people, places, conversations, activities, objects, or situations)*?	0	1	2	3	4
Trouble remembering important parts of the stressful experience?	0	1	2	3	4
Having strong negative beliefs about yourself, other people, or the world *(e.g., having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is dangerous)*?	0	1	2	3	4

Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
Loss of interest in activities that you used to enjoy?	0	1	2	3	4
Feeling distant or cut off from other people?	0	1	2	3	4
Trouble experiencing positive feelings *(for example, being unable to feel happiness or have loving feelings for people close to you)*?	0	1	2	3	4
Irritable behaviour, angry outbursts, or acting aggressively?	0	1	2	3	4
Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
Being “super alert” or watchful or on guard?	0	1	2	3	4
Feeling jumpy or easily startled?	0	1	2	3	4
Having difficulty concentrating?	0	1	2	3	4
Trouble falling or staying asleep?	0	1	2	3	4

General questions about your health

26. Within the past month have you (please circle one option per statement):

	Not at all	No more than usual	Rather more than usual	Much more than usual
Lost much sleep over worry?	0	1	2	3
Felt constantly under strain?	0	1	2	3
Felt you couldn’t overcome your difficulties?	0	1	2	3
Been feeling unhappy and depressed?	0	1	2	3
Been losing confidence in yourself?	0	1	2	3
Been thinking of yourself as a worthless person?	0	1	2	3

	Much less than usual	Less so than usual	Same as usual	More so than usual
Been able to enjoy your normal day-to-day activities?	0	1	2	3
Been feeling reasonably happy, all things considered?	0	1	2	3
Been able to concentrate on whatever you're doing?	0	1	2	3
Been able to face up to your problems?	0	1	2	3
Felt that you are playing a useful part in things?	0	1	2	3
Felt capable of making decisions about things?	0	1	2	3

Questions about head injury

27. Have you ever had a serious blow to the head?

Yes □[1] (*go to qu 28a*) No □[0] (*go to qu 29*)

If multiple blows, please tell us about the most serious:

28. a) Did it leave you feeling dizzy, unsteady or dazed? Yes □[1] No □[0]

28. b) Did it leave you with a gap in your memory of over an hour? Yes □[1] No □[0]

28. c) Were you knocked out, if so for how many minutes?

No, not unconscious □[0] Less than 1 min □[1] 1 to 29 mins □[2] 30 to 59 mins □[3] 60 mins + □[4]

Questions about feeling stressed and angry

29. Please circle the option indicating that best options to describe how you feel.

	Not at all	A little	Moderately	A lot	Very Much
I often find myself getting angry at people or situations	0	1	2	3	4
When I get angry, I get really mad	0	1	2	3	4
When I get angry, I stay angry	0	1	2	3	4
When I get angry I stay angry at someone, I want to hit or clobber the person	0	1	2	3	4
My anger interferes with my ability to get my work done	0	1	2	3	4
My anger prevents me from getting along with people as well as I'd like to	0	1	2	3	4
My anger has a bad effect on my health	0	1	2	3	4

30. During the past month, how often have you (please circle one option on each line):

	Never	Once	Twice	3-4 times	5+ times
Got angry at someone and yell or shout at them	0	1	2	3	4
Got angry with someone and kick or smash something, slam the door, punch the wall etc.	0	1	2	3	4
Got into a fight with someone not in your family and hit the person	0	1	2	3	4
Got angry and hit your spouse / partner	0	1	2	3	4
Got angry and hit another member of your family	0	1	2	3	4
Threaten someone with physical violence	0	1	2	3	4

Questions about your history

31. When I was growing up (please circle one option for each statement):

I came from a close family	True	False
I used to get shouted at a lot at home	True	False
I often used to play truant from school	True	False
I felt valued by my family	True	False
I regularly used to see or hear physical fighting or verbal abuse between my parents	True	False
In my family there was at least one member I could talk to about things that were important to me	True	False
I used to be hit/hurt by a parent or caregiver regularly	True	False
One (or more) of my parents had problems with alcohol or drugs	True	False
My family used to do things together	True	False
I spent some time (any time) in Local Authority Care / Social Services Care	True	False
I had one special teacher/youth worker/family friend who looked out for me	True	False
I often used to get into physical fights at school	True	False
There was at least one thing/activity that I did that made me feel special or proud	True	False
I was suspended/expelled from school (ever)	True	False
I had problems with reading or writing at school and needed extra help	True	False
I did things that should have got me (or did get me) into trouble with the police	True	False
I experienced inappropriate sexual contact from another person	True	False

Question about seeking help for your difficulties

32. Of the difficulties you are personally experiencing, which are these would you most value help to address? (Please tell us all that are relevant to you)

Tyrwhitt House, Oaklawn Road,

Leatherhead, Surrey, KT22 0BX

Tel: 01372 587 100

Fax: 01372 587 001

Helpline: 0800 138 1619

Private & Confidential

Dear [participant],

We are writing to invite you to take part in a research study conducted by Combat Stress and Edinburgh Napier University. The study consists of returning postal questionnaires and aims to look at how veterans have been affected by challenging experiences.

The reason you have been contacted is because you kindly participated in a similar project that Combat Stress ran based around health and well-being. We are now following up the people who took part so that we can gain some additional information on them, to help understand their difficulties in greater depth.

It is completely up to you whether or not you decide to participate and you are free to withdraw at any time without giving a reason. There are no direct benefits for you by taking part, but the information we get from the study will help to ensure that we are delivering the best quality treatment for veterans. This study is entirely separate from any contact you may be having with any services.

Please take some time to read through the information sheet enclosed. After this, if you wish to do so please sign the consent form, complete the attached questionnaires and then return all of these to us in the freepost envelope. Alternatively, if you do not wish to take part, please could you send back the freepost envelope with the blank consent form, so as to indicate that you would like to opt-out of the study.

If you have any queries, or would like any further information, please do not hesitate to contact me on the contact information below.

Yours sincerely,

Emily Pearson

Research Assistant

Telephone: 01372 587 086

Email: Emily.Pearson@combatstress.org.uk

Participant Information Sheet

Psychological Stress in Military Personnel

Invitation

You are being invited to take part in a research study. Before you take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

Background to the Study

Although it is known that people who have had difficult experiences in childhood and adulthood may be at risk of psychological stress in adulthood, the nature of this stress is not well understood. The aim of this study is to investigate how people have been affected from childhood experiences, adulthood experiences and combat stress.

Why have I been invited to take part?

You have already participated in a similar project in the past in Combat Stress on health and well-being. We are now following people up who had participated in this project and we are asking for some additional information in order to understand their difficulties in greater depth.

What does the study involve?

If you decide to participate you will be asked to complete some questionnaires. One will ask you about difficult experiences in childhood, one will ask about experiences in adulthood and a few others will ask you about how you might have been affected by all these experiences. For each of these, you will be presented with a number of statements and asked to indicate how much each of these describes your experiences.

Do I have to take part?

It is up to you whether or not to take part. If you do so, you will be given this information sheet to keep and will be asked to sign a consent form. Also, if you decide to participate you are free to withdraw at any time without giving a reason. A decision to withdraw at any time or a decision to take part, will not affect the standard of care you will receive by any statutory or voluntary service. This study is entirely separate from any contact you may be having with any services.

What are the discomforts or the risks?

The questionnaires you are being asked to complete are routinely used in research projects and clinical practice, and we are not aware of any adverse effects being reported by those completing them.

What will happen to the information you collect about me?

All the information about you is kept confidential and stored by Combat Stress. Your answers on the questionnaire are anonymised. Your answers are collated with other participants' responses and all this information is analysed together and it will not be possible to be identified by your answers. Your

anonymised questionnaires will be stored for up to five years after the study has been completed. The data collected may be presented in conference presentations and submitted for publication in a relevant scientific journal. All person identifiable information will be anonymised prior to dissemination

What are your rights?

Participation in the study is entirely voluntary and you are free to refuse to take part or to withdraw for the study at any point without having to provide a reason. Your decision whether or not to participate in the study will have no influence on any current or future psychological or medical care you receive. It will also have no influence on your relationship with any healthcare, social care or voluntary staff you are involved with. The Edinburgh Napier University Research Ethics Committee, which has responsibility for scrutinising proposals for research conducted by staff and students, has examined this proposal and has raised no objections from the point of view of research ethics.

What to do next

If you are willing to take part in this study please complete the consent form on the next page. If you wish a copy of the overall results from the study or if you have any difficulties or further questions please contact us at the details enclosed. If you wish to speak to someone following completion of the survey please contact Emily Pearson at Combat Stress on 01372 587 086.

Complaints

If you have a concern about any aspect of this study, you should contact either the research team at Combat Stress or Edinburgh Napier, who will do their best to answer your questions. If you remain unhappy and wish to complain formally, you can do this through the Combat Stress or Edinburgh Napier University.

If you would like to access our privacy notice then please contact Emily Pearson at Combat Stress on 01372 587 086.

Further Information

Should you have any questions regarding the study, please do not hesitate to contact the research team at Combat Stress or the research team at Edinburgh Napier University. Either team would be happy to speak with you at any time.

If you would like to contact an independent person, who knows about this project but is not involved in it, you are welcome to contact Dr Walter Busuttil (Medical Director at Combat Stress).

Thank you for taking the time to read and consider the above information. If you are willing to take part in the study, please take time to carefully read and complete the consent form to indicate your consent to participate.

Thank you for taking the time to read this information sheet

Participant Identification Number for this study:

Consent Form

Psychological Stress in Military Personnel

	Please initial box
1. I confirm that I have read and understood the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my care or legal rights being affected. If withdrawn from the study, any data I have provided will be destroyed.	
3. I give permission for the information I provide to be used in reports, publications and presentations with preservation of anonymity.	
4. I understand that information I provide will be treated confidentially and will be stored securely in electronic and paper form.	
5. I agree to take part in the above study.	

_____	_____	_____
Name of Participant	**Date**	**Signature**

Thank you for agreeing to take part in this research

About you

1. Date of birth? _____/_____/_____

2. What is your Relationship Status?

Married / Cohabiting	□[1]	Separated	□[4]
In relationship/not living together	□[2]	Divorced	□[5]
Single	□[3]	Widowed	□[6]

3. Are you currently working?

Full time / part time	□[1]	Not working due to ill health	□[4]
Stay at home parent/caregiver	□[2]	Retired	□[5]
Not working, seeking employment	□[3]	Other	□[6]

4. How often do you feel lonely?

5. How often do you feel socially isolated?

Always □[1] Often □[2] Rarely □[3] Sometimes □[4] Never □[5]

Always □[1] Often □[2] Rarely □[3] Sometimes □[4] Never □[5]

Sleep Condition Indicator – SCI

Thinking about a typical night *in the last month…*	**4**	**3**	**2**	**1**	**0**
How long does it take you to fall asleep?	*0–15 min*	*16–30 min*	*31–45 min*	*46–60 min*	*≥61 min*
If you then wake up during the night … how long are you awake for in total?	*0–15 min*	*16–30 min*	*31–45 min*	*46–60 min*	*≥61 min*
How many nights a week do you have a problem with your sleep?	*0-1*	*2*	*3*	*4*	*5-7*
How would you rate your sleep quality?	*Very good*	*Good*	*Average*	*Poor*	*Very Poor*
Affected your mood, energy, or relationships?	*Not at all*	*A little*	*Somewhat*	*Much*	*Very much*
Affected your concentration, productivity, or ability to stay awake	*Not at all*	*A little*	*Somewhat*	*Much*	*Very much*
Troubled you in general	*Not at all*	*A little*	*Somewhat*	*Much*	*Very much*

DSS-B

For each statement below, circle to show how much each thing has happened to you IN THE PAST WEEK.	**Not at all**	**Once or twice**	**Almost every day**	**About once a day**	**More than once a day**
sleep? *problem* My body felt strange or unreal	*0*	*1*	*2*	*3*	*4*
Things around me seemed strange or unreal	*0*	*1*	*2*	*3*	*4*
I had moments when I lost control and acted like I was back in an upsetting time in my past	*0*	*1*	*2*	*3*	*4*
I heard something that I know wasn't really there	*0*	*1*	*2*	*3*	*4*
I found myself staring into space and thinking of nothing	*0*	*1*	*2*	*3*	*4*
I suddenly realised that I hadn't been paying attention to what was going on around me	*0*	*1*	*2*	*3*	*4*
I reacted to people or situations as if I were back in an upsetting time in my past	*0*	*1*	*2*	*3*	*4*
I smelled something that I know wasn't really there	*0*	*1*	*2*	*3*	*4*

CTQ

When I was growing up…	Never true	Rarely true	Sometimes true	Often true	Very often true
I didn't have enough to eat	*0*	*1*	*2*	*3*	*4*
I knew that there was someone to take care of me and protect me	*0*	*1*	*2*	*3*	*4*
People in my family called me things like "stupid", "lazy" or "ugly"	*0*	*1*	*2*	*3*	*4*
My parents were too drunk or high to take care of the family	*0*	*1*	*2*	*3*	*4*
There was someone in my family who helped me feel that I was important or special	*0*	*1*	*2*	*3*	*4*
I had to wear dirty clothes	*0*	*1*	*2*	*3*	*4*
I felt loved	*0*	*1*	*2*	*3*	*4*
I thought that my parents wished I had never been born	*0*	*1*	*2*	*3*	*4*
I got hit so hard by someone in my family that I had to see a doctor or go to the hospital	*0*	*1*	*2*	*3*	*4*
There was nothing I wanted to change about my family	*0*	*1*	*2*	*3*	*4*
People in my family hit me so hard that it left me with bruises or marks	*0*	*1*	*2*	*3*	*4*
I was punished with a belt, a board, a cord or some other hard object	*0*	*1*	*2*	*3*	*4*
People in my family looked out for each other	*0*	*1*	*2*	*3*	*4*
People in my family said hurtful or insulting things to me	*0*	*1*	*2*	*3*	*4*
I believe that I was physically abused	*0*	*1*	*2*	*3*	*4*
I had the perfect childhood	*0*	*1*	*2*	*3*	*4*
I got hit or beaten so badly that it was noticed by someone like a teacher, neighbour or doctor	*0*	*1*	*2*	*3*	*4*
I felt that someone in my family hated me	*0*	*1*	*2*	*3*	*4*
People in my family felt close to each other	*0*	*1*	*2*	*3*	*4*
Someone tried to touch me in a sexual way or tried to make me touch them	*0*	*1*	*2*	*3*	*4*
Someone threatened to hurt me or tell lies about me unless I did something sexual with them	*0*	*1*	*2*	*3*	*4*
I had the best family in the world	*0*	*1*	*2*	*3*	*4*
Someone tried to make me do sexual things or watch sexual things	*0*	*1*	*2*	*3*	*4*
Someone molested me	*0*	*1*	*2*	*3*	*4*
I believe that I was emotionally abused	*0*	*1*	*2*	*3*	*4*
There was someone to take me to the doctor if I needed it	*0*	*1*	*2*	*3*	*4*
I believe that I was sexually abused	*0*	*1*	*2*	*3*	*4*
My family was a source of strength and support	*0*	*1*	*2*	*3*	*4*

EMIS

Military service can entail doing or witnessing acts that may affect one's emotional well-being, relationships, and later quality of life. When considering your own feelings, beliefs, and behaviors related to things that you did/saw in the military,

please indicate how much you personally agree or disagree with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am ashamed of myself because of things that I	1	2	3	4	5
My military experiences have taught me that it is only a matter of time before people will betray my trust.	1	2	3	4	5
Because of things that I did/saw in the military, I	1	2	3	4	5
In order to punish myself for things that I did/saw in the military, I often neglect my health and safety.	1	2	3	4	5
I feel guilty about things that happened during my military service that cannot be excused.	1	2	3	4	5
The moral failures that I witnessed during my military service have left a bad taste in my mouth.	1	2	3	4	5
Things I saw/did in the military have caused me at times to lose faith in the basic goodness of	1	2	3	4	5
Sometimes I punish others because I feel bad about things I did/saw in the	1	2	3	4	5
When I look back on my military service, I feel disgusted by things that other people did.	1	2	3	4	5

LEC-R

Listed below are a number of difficult or stressful things that sometimes happen to people.

For each event, (1) check a box Yes/No whether it happened in childhood and (2) check a box Yes/No whether it happened in adulthood.

Event	*Happened in childhood (before age of 18)*		*Happened in Adulthood (at or after age 18)*	
	Yes	*No*	*Yes*	*No*
1. Natural disaster (for example, flood, hurricane, tornado, earthquake)				
2. Fire or explosion				
3. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)				
4. Serious accident at work, home, or during recreational activity				
5. Exposure to toxic substance (for example, dangerous chemicals, radiation)				
6. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)				
7. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)				
8. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)				
9. Other unwanted or uncomfortable sexual experience				
10. Combat or exposure to a war-zone (in the military or as a civilian)				
11. Captivity (for example being kidnapped, abducted, held hostage, prison of war)				
12. Life-threatening illness or injury				
13. Severe human suffering				
14. Sudden, violent death (for example, homicide; suicide)				
15. Sudden, unexpected death of someone close to you				
16. Serious injury, harm or death you caused to someone else				
17. Any other stressful event or experience (please describe) _____				

International Trauma Questionnaire

From the previous questions, please identify the experience that troubles you most and answer the questions in relation to this experience.

When did the experience occur?

less than 6 months ago	□	6 to 12 months ago	□	1 to 5 years ago	□
5 to 10 years ago	□	10 to 20 years ago	□	more than 20 years ago	□

*Below are problems that people report in response to traumatic or stressful life events. How much you have been bothered by that problem in the **past month**?*

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Having upsetting dreams that replay part of the experience or are clearly related to the experience?	*0*	*1*	*2*	*3*	*4*
Having powerful images or memories that sometimes come into your mind in which you feel the experience is happening again in the here and now?	*0*	*1*	*2*	*3*	*4*
Avoiding internal reminders of the experience (for example, thoughts, feelings, or physical sensations)?	*0*	*1*	*2*	*3*	*4*
Avoiding external reminders of the experience (for example, people, places, conversations, objects, activities, or situations)?	*0*	*1*	*2*	*3*	*4*
Being "super-alert", watchful, or on guard?	*0*	*1*	*2*	*3*	*4*
Feeling jumpy or easily startled?	*0*	*1*	*2*	*3*	*4*
In the past month have the above problems:					
Affected your relationships or social life?	*0*	*1*	*2*	*3*	*4*
Affected your work or ability to work?	*0*	*1*	*2*	*3*	*4*
Affected any other important part of your life such as parenting, or school or college work, or other important activities?	*0*	*1*	*2*	*3*	*4*

Below are problems that people who have had stressful or traumatic events sometimes experience. The questions refer to ways you feel, think about yourself and relate to others.

How true is this of you?

When I am upset, it takes me a long time to calm down.	*0*	*1*	*2*	*3*	*4*
I feel numb or emotionally shut down.	*0*	*1*	*2*	*3*	*4*
I feel like a failure.	*0*	*1*	*2*	*3*	*4*
I feel worthless.	*0*	*1*	*2*	*3*	*4*
I feel distant or cut off from people.	*0*	*1*	*2*	*3*	*4*
I find it hard to stay emotionally close to people.	*0*	*1*	*2*	*3*	*4*
In the past month, have the above problems in emotions, in beliefs about yourself and in relationships:					
Created concern or distress about your relationships or social life?	*0*	*1*	*2*	*3*	*4*
Affected your work or ability to work?	*0*	*1*	*2*	*3*	*4*
Affected any other important parts of your life such as parenting, or school or college work, or other important activities?	*0*	*1*	*2*	*3*	*4*

11.3 Semi-structured interview schedule

Complex PTSD Interview Schedule

1. Introduce myself
2. Purpose of the study – we are looking at gathering some further information (alongside the questionnaires you kindly filled in) on veterans' experiences and how the complex needs of this population can affect these. We hope the information provided by the study will help develop and shape services for veterans with complex needs.
3. Structure of the Interview – Recording of phone calls, this will then be transcribed once it has been written up the audio recording will be destroyed.
4. Confidentiality & Anonymity – everything you say is confidential and will not affect any care you are receiving either from Combat Stress or any other services. This is something we have to say to everyone when conducting these researches.

Explain that they can take part now, or I can call them back at a suitable time.

Telephone consent

Can you confirm your full name for the recording please?

1. Can you confirm that you understand the information provided about this study and are you satisfied that you have had the opportunity to ask any questions you may have?
2. Can you confirm that you are participating voluntarily and that you understand that you are free to withdraw at any time without giving any reason? (this will not affect any treatment/care you may currently, or in the future, receive from CS)
3. Do you give permission for any information you provide, once anonymised, to be used for publications/reports/presentation?
4. Do you understand that the information you provide will be treated confidentially and will be stored securely in electronic form?
5. Are you still happy to take part?

State time and date for recording

Part 1

1) When did you first seek help from mental health services?

less than 6 months ago ☐ 6 to 12 months ago ☐ 1 to 5 years ago ☐

5 to 10 years ago ☐ 10 to 20 years ago ☐ more than 20 years ago ☐

2) How long were you having difficulties before you decided to seek support from this service?

less than 6 months ago ☐ 6 to 12 months ago ☐ 1 to 5 years ago ☐

5 to 10 years ago ☐ 10 to 20 years ago ☐ more than 20 years ago ☐

3) a) Are you currently engaged with any services? Yes ☐ No ☐

b) If so, what are they?

- GP ☐
- NHS Mental Health Services ☐
- Private Mental Health Services ☐
- Charitable services ☐
- Other, please specify

_____

c) What type of treatment are you getting from this service?

- Residential stay / Inpatient ☐
- Outpatient Therapy / counselling ☐
- Group Therapy ☐
- Other, please specify

_____

4) Are you currently taking any medication? If so, what are their names?

Part 2

1- I can see that it took some time before you contacted the ____ service, were there any barriers that prevented you from you seeking support from this service?

Prompts: Mental health difficulties e.g. avoidance, family / friends, stigma, delays in referral process.

2- What, for you, were the biggest challenges of accessing support? Why? What could or could not have been done differently to help you?

Prompts: Cohort, therapist, environment, location, finances.

3- Despite experiencing these challenges, you continued to access support why? What influenced your decision to continue?

Prompts: location of treatment, therapist, cohort members, family / friends, motivation, reduction of symptoms, finances.

4- Are there any areas of your life that you don't think have improved? What are these?

Prompts: PTSD symptoms, psychological problems, relationships, social life.

5- In what ways do you think receiving treatment has had a lasting impact on your wellbeing?

Prompts: Interpersonal relationships, beliefs of self, social life, PTSD symptoms, low mood, emotional regulation.

General Prompts

Tell me more about that….

What was it about x in particular that was helpful/unhelpful?

12.0 Appendix 2: Chapter A further details

12.1 Chapter A detailed methodology

12.1.1 Setting

Participants were recruited from a pre-existing cohort of Combat Stress service users. In 2017, a previous study had selected a nationally representative sample of treatment seeking veterans by randomly sampling 20% of veterans engaged with the charity and recruited 403/600 (67.2%) of this random sample to participate in a project about the health and wellbeing of veterans[90]. The current study aimed to follow-up all 403 participants of that study.

12.1.2 Participants

69 of the initial 403 individuals were excluded from the current study because they had either died (n=8), had opted out of being followed-up (n=5) or had incomplete contact details that prohibited being re-contacted (n=56). This left 334 individuals who were eligible and invited to participate in the study. Individuals were requested to complete questionnaires via a three-wave postal mail-out strategy, followed by attempting to telephone individuals to remind them about the study. Data was collected between October 2018 and April 2019. 177 of the 334 eligible participants returned completed questionnaires (53.0%) (Figure 12.1).

12.1.3 Measures: ICD-11 PTSD and CPTSD

The International Trauma Questionnaire (ITQ) is the only self-report measure of ICD-11 PTSD and CPTSD symptoms[91]. Six symptoms and three items assessing functional impairment were used to assess PTSD. Participants indicate, considering their most traumatic event, how much they have been bothered by each core symptom in the past month, using a five-point Likert scale ranging from 'Not at all' (0) to 'Extremely' (4).

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[90] Murphy, D., Ashwick, R., Palmer, E., & Busuttil, W. (2017). Describing the profile of a population of UK veterans seeking support for mental health difficulties. Journal of Mental Health, 6, 1-8

[91] Cloitre, M., Shevlin, M., Brewin, C. R., Bisson, J., Roberts, N., Maercker, A. et al. (2018). The International Trauma Questionnaire: development of a self-report measure of ICD-11 PTSD and complex PTSD. Acta Psychiatrica Scandinavica, 138(6), 536-546.

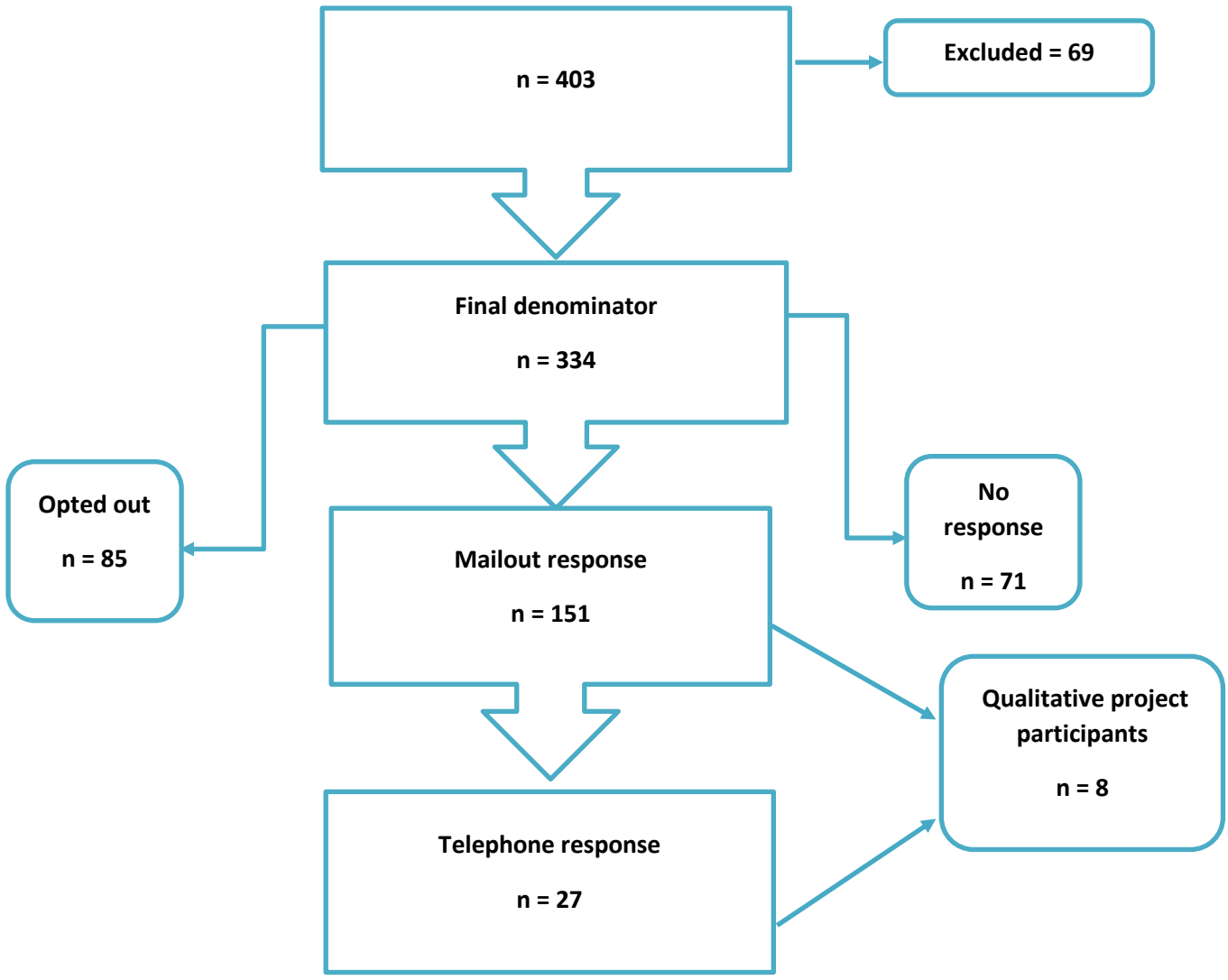


FIGURE 12.1 FLOWCHART OF RECRUITMENT TO STUDY

Two symptoms each reflect the "Re-experiencing" cluster ("Upsetting dreams" and "Feeling the experience is happening again in the here and now"), the "Avoidance" cluster (internal reminders and external reminders), and the "Sense of Threat" cluster (hypervigilance and exaggerated startle response). Three items screened for functional impairment associated with (1) relationships and social life, (2) work or ability to work, and (3) other important aspects of life, such as parenting, school/college work, or other important activities. To assess disturbances in self-organization (DSO), participants are asked how they typically feel, think about themselves, and relate to others, using a five-point Likert scale ranging from 'Not at all' (0) to 'Extremely' (4). Two items capture the "Affective Dysregulation" cluster ("When I am upset, it takes me a long time to calm down" and "I feel numb or

emotionally shut down"), "Negative Self-concept" cluster ("I feel like a failure" and "I feel worthless"), and "Disturbed Relationships" cluster (I feel distant or cut off from people and I find it hard to stay emotionally close to people). As with the PTSD symptoms, there are three items that screen for functional impairment associated with DSO symptoms.

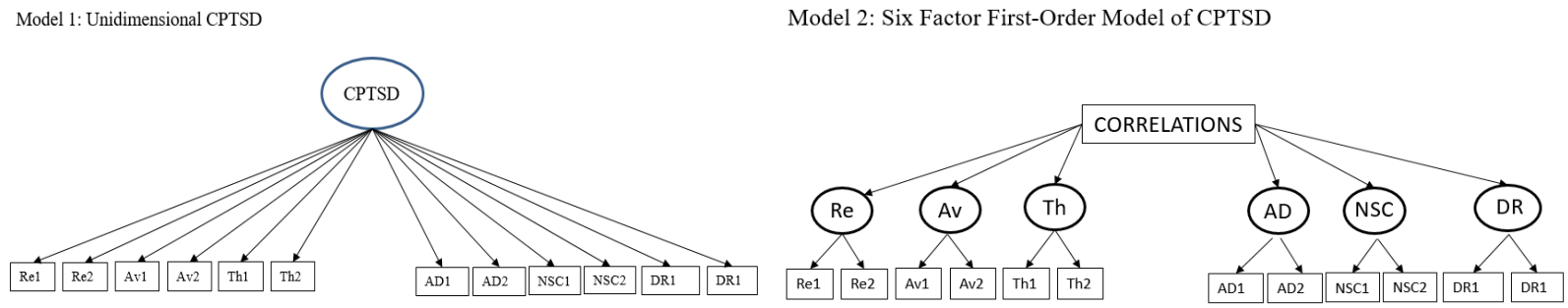
Diagnostic criteria for PTSD require a score of ≥ 2 ('Moderately') for at least one of two symptoms from each of the Re-experiencing, Avoidance, and Threat clusters, and at least one functional impairment item to be endorsed (≥ 2). The diagnostic criteria for CPTSD include satisfying these PTSD criteria *in addition to* scoring ≥ 2 ('Moderately') for at least one symptom from each of the Affective Dysregulation, Negative Self-concept, and Disturbed Relationships" clusters, and at least one functional impairment item to be endorsed (≥ 2). Based on the ICD-11 diagnostic rules a diagnosis of PTSD or CPTSD, but not both, can be made.

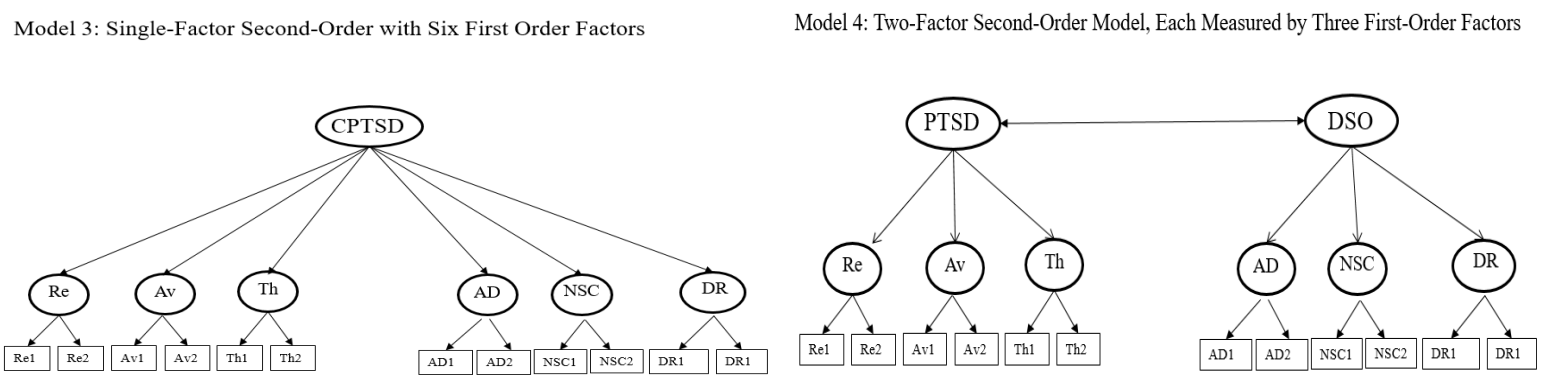
12.1.4 Statistical Analysis

The ITQ was tested using confirmatory factor analysis (CFA), in which a measure constructed from a theoretical basis is tested against empirical data, based on responses to the 12 core symptom items. Four potential models that can be most directly derived from the ICD-11 description of CPTSD were specified and compared as representations of PTSD and CPTSD (Figure 12.1)[92].

[92] Brewin, C. R., Cloitre, M., Hyland, P., Shevlin, M., Maercker, A., Bryant, R. et al. (2017). A review of current evidence regarding the ICD-11 proposals for diagnosing PTSD and complex PTSD. Clinical Psychology Review, 58, 1-5.

Figure 12.1 Alternative factor analytic models of PTSD and CPTSD.





- Model 1 is a one-factor model where all individual symptoms load on a single latent variable representing CPTSD.
- Model 2 is a correlated six-factor model, based on the ICD-11 specification of 3 PTSD and 3 DSO symptom clusters each measured by their respective two symptoms.
- Model 3 replaced the factor correlations in Model 2 with a single second-order factor representing CPTSD. This model proposes that there is no distinction between PTSD and DSO at the second-order level.
- Model 4 specified two correlated second-order factors (PTSD and DSO) to explain the covariation among the six first-order factors, with first-order symptom clusters loading to their respective PTSD and DSO second-order levels following the ICJ-11 specification.

For all models the error variances were specified to be uncorrelated.

12.1.5 Ethics and consent

The study was granted ethical approval from the research ethics committee of Edinburgh Napier University and approved by the Combat Stress research committee. Written consent was obtained from all participants.

12.2 Chapter A results tables

Table 12.1 Fit Statistics for the Alternative Models of the International Trauma Questionnaire.

Model	Chi-square (df)	RMSEA (90% CI)	CFI	TLI	SRMR	BIC
1. 1 factor model	418.481 (54)*	.195 (.178 - .212)	.648	.570	.116	6111.805
2. 61st order factors	62.013 (39)*	.058 (.028 - .084)	.978	.962	.038	5691.351
3. 6 1st order, & 1 2nd order factors	135.939 (48)*	.101 (.082 - .122)	.915	.883	.089	5738.660
4. 6 1st order, & 2 2nd order factors	80.171 (47)*	.063 (.038 - .086)	.968	.955	.054	5673.396

Note: * p < .05; df = degrees of freedom; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardised Root Mean Residual; BIC = Bayesian Information Criterion.

Models 1 and 3 were rejected as they failed to meet the criteria of acceptable model fit. The correlated 6-factor model (Model 2) and the second order variant (Model 4) were both well-fitting models based on the RMSEA, CFI, TLI and SRMR. For both of these models the chi-square was high relative to the degrees of freedom, but this should lead to a rejection of the model as the value of the chi-square is positively associated with sample size (Tanaka, 1987). The models did not differ in the adjusted chi-square (Dc2=13.20, Ddf=8, p = .11), but the BIC was lower for Model 4, and therefore it was judged to be the best model.

Table 12.2 Mean Scores and Item Endorsement of the International Trauma Questionnaire

	Mean (SD)	Endorsement N (%)
PTSD Items		
Upsetting dreams (Re1)	2.50 (1.27)	141 (79.2%)
Reliving the event in the here and now (Re2)	2.46 (1.30)	132 (74.2%)
Internal avoidance (Av1)	2.59 (1.26)	144 (80.9%)
External avoidance (Av2)	2.73 (1.23)	146 (82.0%)
Being on guard (Th1)	3.26 (1.08)	160 (89.9%)
Jumpy/startled (Th2)	3.01 (1.18)	155 (87.1%)
DSO Items		
Long time to calm down (AD1)	2.92 (1.06)	158 (88.8%)
Numb (AD2)	2.80 (1.14)	154 (86.5%)
Failure (NSC1)	2.60 (1.39)	132 (74.2%)
Worthless (NSC2)	2.47 (1.42)	128 (71.9%)
Cut-off from others (DR1)	2.96 (1.13)	153 (86.0%)
Difficult to stay close to others (DR2)	3.02 (1.21)	153 (86.0%)

13.0 Appendix 3: Chapter B further details

13.1 Chapter B detailed methodology

13.1.1 Participants and procedure

This study utilised the same 177 participants as described in section 12.1 above. These participants did not differ from the remaining cohort in terms of gender (χ^2 (1)=.59, p = .44), service in a combat role or not (χ^2 (1)=.04, p = .85), or whether they were likely to have a common mental health disorder as determined by the 12 item General Health Questionnaire (GHQ-12) (χ^2 (1)=.04, p = .84). When compared on a 4-category age variable (<35 years, 35-44 years, 45-54 years, 55+ years), the participants in the follow-up group were older than the remaining cohort with more than expected in the 45-54 years and 55+ age groups (χ^2 (3)=.13.12, p < .01). Consequently, a weight variable based on age group was calculated and used in all subsequent analyses.

13.1.2 Measures

Socio-demographic and military characteristics

Participants completed questions asking about socio-demographic characteristics including information on gender, age, current relationship status, current employment status and length of time between leaving the military and seeking support (greater or less than five years). Military characteristics included which service they had been enlisted with (Royal Navy, Army or Royal Air Force), enlistment type (regular, reservist or both), length of service (from which early service leavers could be identified and defined as completing less than four years of continuous service) and whether they were in receipt of a war pension (paid due to receiving service-related injury or disability).

Childhood adversity

Childhood adversity was assessed using items that had previously been used in an ongoing epidemiological survey of the wider UK military[93]. Participants were asked if they had been exposed to 16 difficult early life experiences. Participants either indicated 'Yes' (1) or 'No' (0) about their exposure, and a total childhood adversity score was calculated by summing the scores producing scores with a potential range of 0 to 16. A score of 6 or more was categorised to indicate 'high childhood adversity'[94]. In addition to childhood adversity, four questions were asked about exposure to potential non-combat adversity during military service (emotional bullying, physical assault, sexual harassment and sexual assault) and participants either indicated 'Yes' (1) or 'No' (0).

Childhood Trauma

The Childhood Trauma Questionnaire (CTQ) is a 28-item, self-report questionnaire that assesses exposure to a range of different childhood traumas[95]. The scale produces five subscales, each with five items: Emotional Abuse, Physical Abuse, Sexual Abuse, Emotional Neglect, and Physical Neglect. Items are responded to using a 5-point scale ranging from "never true" (1) to "very often true" (5) and summed scores for the subscales (possible range 5 to 25) and a total scale score (possible range 25 to 125) were calculated, with higher scores suggesting more severe maltreatment. The CTQ also has cut-offs to categorise scores as 'None', 'Low', 'Moderate' and 'Severe'.

[93] Iversen, A., Fear, N., Simonoff, E., Hull, L., Horn, O., Greenberg, N. et al. (2007). Influence of childhood adversity on health among male UK military personnel. British Journal of Psychiatry, 191, 506-511.
[94] Murphy, D., Ashwick, R., Palmer, E., & Busuttil, W. (2017). Describing the profile of a population of UK veterans seeking support for mental health difficulties. Journal of Mental Health, 6, 1-8.
[95] Bernstein, D. P., & Fink, L. (1998). Childhood trauma questionnaire: A retrospective self-report: Manual. San Antonio, TX: The Psychological Corporation.

Traumatic Life Events

We used a modified version of the Life Events Checklist (LEC)[96]. This is a 17-item, self-report measure to screen for exposure to potentially traumatic events. The LEC assesses lifetime exposure to 16 traumatic events (e.g. natural disaster, physical assault, life threatening illness/injury) and the 17th item, "Any other very stressful event/experience", can be used to indicate exposure to a trauma that was not listed. For each item, the respondent checks whether they experienced the event ("Yes" or "No") and whether it 'Happened in childhood (before age of 18)' or "Happened in Adulthood (at or after age 18)". A total cumulative variable was created for both childhood and adult trauma with possible scores ranging from 0 to 16; item 17 was not included as the nature of the trauma could not be identified.

Anxiety and depression

Symptoms of anxiety and depression were measured using the 12-item General Health Questionnaire (GHQ-12)[97]. The GHQ–12 is a self-report scale with total possible scale scores range from 0 to 12, with higher scores indicating higher levels of psychological distress.

Anger

Difficulties with anger were assessed with the five-item Dimensions of Anger Reactions Scale (DAR-5)[98]. The items are responded to on a 5-point Likert scale ranging from 1 (None or almost None of the time) to 5 (All or almost all of the time), and the scores were summed to produce an overall scale score ranging from 5 to 25. Higher scores reflect higher levels of anger.

Alcohol use

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[96] Gray, M., Litz, B., Hsu, J., & Lombardo, T. (2004). Psychometric properties of the life events checklist. Assessment, 11(4), 330-341.
[97] Goldberg, D., & William, P. (1998). A users' guide to the General Health Questionnaire. Windsor: NFER-Nelson.
[98] Forbes, D., Alkemade, N., Mitchell, D., Elhai, J., McHugh, T., Bates, G. et al. (2014). Utility of the Dimensions of Anger Reactions-5 (DAR-5) scale as a brief anger measure. Depression and Anxiety, 31(2), 166-173.

Alcohol use and related problems were assessed using the Alcohol Use Disorders Identification Test (AUDIT)[99]. The scale comprises 10 items referring to alcohol consumption and alcohol-related problems in the past 12 months and items are scored on a scale from 0 to 4, producing a range of scores from 0 to 40. Higher scores reflect higher levels of hazardous drinking.

Functional impairment

Functional impairment was measured using the 5-item Work and Social Adjustment Scale (WSAS)[100]. The WSAS is scored on an 9-point Likert scale from 0 (no impairment) to 8 (very severe impairment) and covers the functioning domains of ability to work, home management, social leisure, private leisure, and ability to form and maintain close relationships. The WSAS produces possible scores ranging from 0 to 40, with higher scores indicating greater impairment.

Moral Injury

Moral injury has been defined as the psychological distress which may result from actions, or the lack of them, which violate one's moral or ethical code[101]. Moral Injury was measured using the 17-item Expressions of Moral Injury Scale (EMIS)[102]. The items are responded to on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), and the scores were summed to produce an overall scale score ranging from 17 to 85. Higher scores reflect higher levels of moral injury.

Sleep problems

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[99] Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). AUDIT. The Alcohol Use Disorders Identification Test Geneva: Department of Mental Health and Substance Dependence, World Health Organization.

[100] Mundt, J. C., Marks, I. M., Shear, M. K., & Greist, J. H. (2002). The Work and Social Adjustment Scale: a simple measure of impairment in functioning. British Journal of Psychiatry.180:461-4.

[101] Litz, B., Stein, N., Delaney, E., Lebowitz, L., Nash, W., Silva, C. et al. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. Clinical Psychology Review, 29(8), 695-706.

[102] Currier, J., Farnsworth, J., Drescher, K., McDermott, R., Sims, B., & Albright, D. (2018). Development and evaluation of the Expressions of Moral Injury Scale-Military Version. Clinical Psychology and Psychotherapy, 25(3), 474-488.

Sleep problems were measured using the 8-item Sleep Condition Inventory (SCI)[103]. The SCI comprises two items, each assessing four areas of sleep disruption including sleep continuity, sleep satisfaction/dissatisfaction, severity, and attributed daytime consequences of poor sleep. Items are responded to on 5-point scales (scored 0 to 4), and produces possible scale scores ranging from 0 to 32, with higher scores indicative of better sleep.

Dissociation

Dissociation was measured using the 8-item Dissociative Symptoms Scale (DSS-B) which assesses moderately severe trauma-related intrusions, gaps in awareness or memory, and distortions in perceptions of oneself or surroundings that persist after traumatic stress[104]. Participants respond to each item using a five-point Likert scale ranging from 0 ('not at all') to 4 ('more than once a day').

Social connectedness

Two questions were used to assess loneliness (How often do you feel lonely?) and social isolation (How often do you feel socially isolated?) and used a 5-point Likert scale ranging from 1 to 5, and the scale scores from each question were used separately.

13.1.3 Data analysis

Statistical analysis was conducted in three linked phases:

1. The rates of CPTSD and PTSD for the follow-up sample were estimated as described in 12.1.3 above.
2. Potential military, and childhood adversity factors were identified, and the association between these and diagnostic status was assessed using chi-square tests (i.e. a test of whether each factor was significantly more likely to occur within a given diagnosis).

[103] Espie, C., Kyle, S., Hames, P., Gardani, M., Fleming, L., & Cape, J. (2014). The Sleep Condition Indicator: a clinical screening tool to evaluate insomnia disorder. BMJ Open, 4(3).
[104] Carlson, E., & Putnam, F. (1993). An update on the Dissociative Experiences Scale. Dissociation, 6, 16-27.

3. A multinomial logistic regression model (in which the likelihood and statistical significance of association between a factor and several potential outcomes) was used to test which variables predicted CPTSD and PTSD (compared to no disorder).
4. Finally, the diagnostic groups were compared on a range of psychological variables (loneliness, social isolation, sleep problems, dissociation, & moral injury) to determine whether there were significant associations between these variables and the diagnostic groups.

All analyses were conducted using SPSS.

Ethical approval

Ethical approval for this study was granted by the Edinburgh Napier University Ethics Committee, as in 12.1.5 above.

13.2 Chapter B results tables

Table 13.1 **Demographic characteristics of follow-up sample (N=177)**		
	N	%
Gender (male)	169	95.1
Age		
<35 years	12	6.7
35-44 years	26	14.9
45-54 years	56	31.7
55+ years	83	46.8
Relationship Status		
Married/Cohabiting	106	59.9
In relationship/not living together	11	6.4
Single	27	15.3
Separated	5	2.9
Divorced	23	13.0
Widowed	5	2.5
Employment Status		
Full / part time	48	28.0
Stay at home parent or caregiver	3	1.7
Not working	11	6.1
Not working due to ill health	74	43.1
Retired	36	21.0
Note N's may not add up to N=177 because of missing data		

Table 13.2 **Military characteristics of follow-up sample (N=177)**		
	N	%
Service		
Royal Navy	12	6.7
Army	153	86.5
Royal Air Force	12	6.9
Enlistment		
Regular	116	68.2
Reservist	6	3.2
Regular and Reservist	49	28.6
Length of service		
<4yrs	17	9.4
4-14yrs	89	50.1
15yrs+	71	40.5
Number of deployments		
0	16	9.3
1	96	54.4
2	35	19.6
3 or more	30	16.7
War pension		
Yes	108	60.8
Note: N's may not add up to N=177 because of missing data		

Table 13.3 **Potential demographic, military, trauma risk factors and association with diagnostic status.**

	CPTSD	PTSD	No PTSD	Total	χ^2	df	p
	N (%)	N (%)	N (%)	N (%)			
	96 (54.3%)	24 (13.8%)	57 (32.0%)	177 (100%)			
Gender (male)	91 (94.8%)	23 (95.8%)	54 (94.7%)	168 (94.9%)	.049	2	.976
Age					19.923	6	.003
<35 years	2 (2.1%)	0 (0.0%)	10 (17.9%)	12 (6.8%)			
35-44 years	16 (16.5%)	6 (25.0%)	4 (7.1%)	26 (14.7%)			
45-54 years	34 (35.1%)	7 (29.2%)	15 (26.8%)	56 (31.6%)			
55+ years	45 (46.4%)	11 (45.8%)	27 (48.2%)	83 (46.9%)			
Relationship (in relationship)	53 (55.2%)	17 (70.8%)	36 (63.2%)	106 (59.9%)	2.326	2	.313
Employment (FT/PT)	21 (21.9%)	5 (20.0%)	22 (39.3%)	48 (27.1%)	6.171	2	.046
Combat role	66 (68.8%)	15 (60.0%)	29 (50.9%)	110 (61.8%)	4.879[a]	2	.087
Emotional bullying in military	48 (55.8%)	9 (37.5%)	20 (36.4%)	77 (46.7%)	6.047	2	.049
Physical assault in military	40 (49.4%)	5 (22.7%)	17 (31.5%)	62 (39.5%)	7.354[a]	2	.025
Sexual harassment in military	6 (8.2%)	2 (10.0%)	4 (7.5%)	12 (8.2%)	.116[a]	2	.944

Sexual assault in military	7 (9.7%)	2 (10.0%)	3 (5.7%)	12 (8.3%)	.754[a]	2	.686
Joined > 18 years old	71 (74.0%)	18 (75.0%)	32 (57.1%)	121 (68.8%)	5.160[a]	2	.076
Time to contact CS > 5 years	49 (51.0%)	16 (66.7%)	18 (32.1%)	83 (47.2%)	9.313[a]	2	.009
Early service leaver	11 (11.5%)	2 (8.3%)	4 (7.0%)	17 (9.6%)	.864[a]	2	.649
High childhood adversity	54 (55.7%)	11 (45.8%)	20 (35.1%)	85 (47.8%)	6.137[a]	2	.046

Table 13.4 Multinomial logistic regression results predicting CPTSD and PTSD

	CPTSD			PTSD		
	B (se)	Sig.	OR (95% CI)	B (se)	Sig.	OR (95% CI)
Age	.26 (.22)	.254	1.29 (.82 - 2.03)	-.06(.32)	.838	.93 (.49- 1.76)
Employment (FT/PT)	-.68 (.46)	.147	.50 (.20- 1.26)	-1.38(.77)	.076	.25 (.05- 1.15)
Combat role	1.12 (.44)	.011	3.08 (1.29- 7.36)	.26(.61)	.672	1.29 (.38- 4.32)
Emotional bullying in military	.95 (.57)	.097	2.59 (.84-8.00)	.75(.84)	.370	2.12 (.40- 11.01)
Physical assault in military	.46 (.56)	.410	1.58 (.52- 4.75)	-.59(.86)	.494	.55 (.10- 3.01)
Joined > 18 years old	.95 (.43)	.029	2.59 (1.10- 6.08)	.63(.60)	.293	1.88 (.57- 6.16)
Time to contact CS > 5 years	.52 (.43)	.230	1.69 (.71- 4.00)	1.69(.64)	.009	5.44 (1.52- 19.44)
High childhood adversity	.85 (.41)	.037	2.35 (1.05- 5.25)	.31(.57)	.585	1.37 (.44- 4.23)

Table 13.5 Correlations between PTSD and DSO scores and Childhood Trauma Questionnaire and Life Events Checklist scores.

	Emotional Abuse	Physical Abuse	Emotional Neglect	Physical Neglect	Sexual Abuse	LEC Adult	LEC Child
PTSD	.231**	.144	.168*	.178*	.190*	.210**	.224**
DSO	.261***	.202**	.217**	.122	.151	.195**	.244***
Total ITQ	.278***	.196**	.218***	.169*	.191*	.228***	.264***

Note: $p < .05$*, $p < .01$*, $p < .001$*.

Table 13.6 Differences between diagnostic groups on psychological variables

	CPTSD[a] Mean (SD)	PTSD[b] Mean (SD)	No PTSD[c] Mean (SD)	Total Mean (SD)	Range	ANOVA	Post-hoc
Loneliness	3.89 (.99)	3.03 (1.23)	3.02 (1.11)	3.50 (1.14)	1 - 5	F(2, 172) = 14.36, p < .001	a >b,c
Socially Isolated	3.97 (.95)	3.28 (1.06)	3.40 (.95)	3.69 (1.01)	1 - 5	F(2, 171) = 8.46, p < .001	a >b,c
Sleep problems (SCI)	7.04 (5.41)	9.60 (7.36)	13.83 (7.28)	9.56 (7.00)	0 - 32	F(2, 174) = 20.37, p < .001	a,b< c
Dissociation (DSS)	17.30 (7.51)	9.71 (4.25)	8.84 (6.41)	13.55 (7.92)	0 - 32	F(2, 174) = 31.85, p < .001	a >b,c
Moral Injury (EMIS)	60.40 (14.68)	46.75 (12.37)	45.36 (17.81)	53.77 (17.05)	17 - 85	F(2, 174) = 19.30, p < .001	a >b,c
Functioning (WSAS)	26.12 (9.37)	26.73 (8.29)	20.38 (9.12)	24.35 (9.51)	0 -40	F(2, 174) = 7.91, p = .001	a >b,c
Drinking (AUDIT)	9.53 (10.25)	5.09 (5.94)	8.75 (8.58)	8.67 (9.32)	0-40	F(2, 174) = 2.235, p = .110	
CMD (GHQ12)	7.68 (3.93)	5.31 (4.03)	4.54 (3.76)	6.34 (4.14)	0-12	F(2, 174) = 12.465, p < .001	a >b,c
Anger (DAR5)	16.89 (7.64)	12.21 (6.66)	11.59 (7.86)	14.52 (7.97)	0-28	F(2, 173) = 9.881, p < .001	a >b,c

14.0 Appendix 4: Chapter C further details

14.1 Chapter C detailed methodology

14.1.1 Participants and procedure

Potential participants were selected from those within the sample described in Appendix 2 who exhibited CPTSD symptoms. Eligible participants were each given randomly allocated numbers which were ordered from high to low and then approached sequentially until eight participants were recruited. The collection of data from our sample of eight veterans resulted in thematic saturation which was determined by the research team when no additional themes were found from the reviewing of successive data.

A semi-structured interview schedule was developed based on the existing literature and the research aims. The interview schedule included items relating to current help-seeking and challenges accessing support (e.g. when did you first seek help from a mental health service; how long were you having difficulties before you sought help; what were the biggest challenges of accessing support; what could have been done differently to help you; for the full interview schedule see 11.3 above). The interviews lasted an average of 45 minutes. Interviews were audio recorded with consent and transcribed verbatim.

Data were analysed using the thematic analysis guidelines[105]. The primary researcher familiarised themselves with the transcripts, produced codes, searched for and developed emerging themes, revised and refined themes, and determined connections between the themes which, where applicable, were grouped together under superordinate themes. To ensure reliability, all codes and themes were independently reviewed by a second researcher. A reflexive journal was kept during data analysis to acknowledge the influence of the researcher's prior experiences, thoughts and expectations and avoid potentially biased interpretations of the data. Peer debriefing to enhance the credibility of the findings was conducted and discussions about the data interpretation and analysis were held with further investigators who have experience with qualitative research and military mental health.

[105] Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101

14.2 Chapter C detailed results

All participants indicated that they had been exposed to experiences that met criteria for trauma on the ICD-11. The majority of the sample were male (n=7, 87.5%), married (n=5, 62.5%) and had served in the British Army (n=7, 87.5%). Half of the sample had been deployed in a combat role (n=4, 50.0%). The mean age of participants was 64.3 years (SD 5.5) and the average length of military service was 23 years (SD 16.91; range 4-43 years).

At the time of the interview, five participants were no longer actively receiving support from a mental health service, while others were receiving group therapy (n=1, 12.5%) or outpatient therapy (n=2, 25.0%). The majority of participants were taking one or more medications for their mental health difficulties (n=6, 75%). One of the participants reported having first sought support between 1-5 years previously, three participants between 5-10 years previously and four participants stated that they first accessed mental health services 10 or more years previously; thus most participants had been struggling with mental health difficulties for at least five years.

Three key superordinate themes emerged following the thematic analysis: experiences of stigma influencing help-seeking, psychological factors influencing help-seeking, and organisational barriers to treatment.

Experiences of stigma in help-seeking

One superordinate theme that emerged in relation to help-seeking was the experience of stigma and stigma-related barriers to care regarding their own and others mental health difficulties. Different types of stigma and barriers were experienced both within and outside of the military setting, including career concerns, perceived stigma from others, limited awareness of support for mental health problems and issues relating to confidentiality.

The majority of veterans with CPTSD described that it was not acceptable to show any weakness or emotions because, as (ex-)military personnel, they should always be a pillar of strength. Compounding this effect was concerns that the disclosure of a mental health problem would negatively impact one's career. In particular, veterans described concerns that disclosure would lead others to think less of them, that they were not fit to perform their duties and may be a risk to colleagues. Consequently disclosing a mental health problem and seeking formal help was thought by some veterans to possibly have adverse knock-on effects on their family's finances and emotional wellbeing. These concerns hampered support seeking, with veterans describing waiting until crisis point was reached before seeking formal help.

When veterans did feel the need to seek formal help, many described not knowing where to access support and did not feel that they had been adequately signposted to mental health services on leaving the Armed Forces. The limited awareness of the treatment options available may, in part, explain why several veterans described a fear that if they disclosed their mental health problems they would be 'taken away', such as being sectioned under the Mental Health Act. During military service, some veterans described that help-seeking from Ministry of Defence (MoD) services was not an option as this care was not thought to be anonymous or confidential, especially as the staff member's role as a mental health professional was well known in the community.

Psychological factors influencing help-seeking

A second superordinate theme was found relating to emotional or psychological factors that influenced help-seeking. Sub-themes included poor awareness or understanding of PTSD and feeling unworthy of support. At the same time, social support systems to overcome such barriers were felt to be very important.

Several veterans described being unaware that they were experiencing trauma-related mental health problems; some veterans were able to maintain daily functioning using coping strategies and therefore didn't consider themselves to have a problem, while others reported being unaware that trauma exposure could be the cause of their symptoms. Consequently they were reluctant to engage with formal support when others suggested they should seek help. Reluctance to seek support was also fuelled by a feeling of being unworthy or undeserving of formal help as they perceived others to be in greater need. Acknowledgement that they were struggling often took several years to develop. A further psychological barrier to seeking help was veteran concerns that their disclosure of traumatic events experienced during military service may cause distress for the clinician.

Notably, a number of facilitators to help-seeking were also experienced. Speaking with veteran peers who had had similar experiences was felt to be very helpful, both in realising that they were not alone in experiencing psychological difficulties and also by sharing information about available services. Family members were often considered an invaluable source of support by many veterans; partners in particular often helped them to manage their symptoms (e.g. dissociation, nightmares, etc.) and encouraged them to access formal treatment. Nonetheless, in cases where formal help was not sought for many years, some veterans described that their post-trauma responses and behaviours had a detrimental effect on their family, with a number of veterans now estranged from family members.

Organisational barriers to accessing and engaging with treatment

The majority of veterans described that once they had decided to seek treatment, accessing care could be challenging as services were often overstretched and had long waiting lists. If they were offered treatment, some veterans described being offered a small number of sessions (maximum of 6) with several weeks between appointments. This was felt to be an inadequate provision of care to address the complex needs of military personnel. By comparison, physical health care was thought to be more easily accessible than mental health care, especially for those living in rural areas.

Some veterans felt poorly understood by healthcare services. They perceived that, as a veteran, their post-trauma responses and symptoms were not commonly found in civilians given their unique exposure to combat trauma. Veterans reported that their General Practitioner (GP) did not recognise their symptoms as trauma symptoms and others felt that their psychological difficulties were dismissed by clinical care teams. Limited consideration was reportedly given for re-traumatisation and veterans described having to repeatedly state to different mental health services their reason for seeking help, the trauma(s) experienced and their current symptoms.

Once support was accessed, difficulties building rapport with clinicians could be experienced. For example, if the clinician's gender or ethnicity was related to the trauma veterans were concerned that the clinician would be unable to effectively treat them as they would inadvertently trigger their trauma memory. Despite this, many veterans identified several positive aspects of their treatment, including learning coping strategies to manage their symptoms, receiving advice about the support available from other veteran-affiliated organisations, and expectation management that their symptoms may never be 'cured' but could be more effectively managed. Nonetheless, on discharge, some veterans felt that there was very limited follow up care offered from mental health services and more regular contact following discharge would be beneficial.