



Restore and Rebuild (R&R) – a feasibility pilot study of a co-designed intervention for moral injury-related mental health difficulties

Victoria Williamson, Dominic Murphy, Amanda Bonson, Vicky Aldridge, Danai Serfioti & Neil Greenberg

To cite this article: Victoria Williamson, Dominic Murphy, Amanda Bonson, Vicky Aldridge, Danai Serfioti & Neil Greenberg (2023) Restore and Rebuild (R&R) – a feasibility pilot study of a co-designed intervention for moral injury-related mental health difficulties, European Journal of Psychotraumatology, 14:2, 2256204, DOI: [10.1080/20008066.2023.2256204](https://doi.org/10.1080/20008066.2023.2256204)

To link to this article: <https://doi.org/10.1080/20008066.2023.2256204>



© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



[View supplementary material](#)



Published online: 21 Sep 2023.



[Submit your article to this journal](#)




[View related articles](#)



[View Crossmark data](#)

Restore and Rebuild (R&R) – a feasibility pilot study of a co-designed intervention for moral injury-related mental health difficulties

Victoria Williamson ^{a,b}, Dominic Murphy^c, Amanda Bonson^c, Vicky Aldridge^c, Danai Serfioti^{b,d} and Neil Greenberg^b

^aDepartment of Experimental Psychology, Anna Watts Building, University of Oxford, Oxford, UK; ^bInstitute of Psychiatry, Psychology and Neuroscience, King's Centre for Military Health Research, King's College London, London, UK; ^cResearch Department, Combat Stress, Surrey, UK; ^dDepartment of Psychology, School of Social Sciences, Nottingham Trent University, Nottingham, UK

ABSTRACT

Background: Moral injury can significantly negatively impact mental health, but currently no validated treatment for moral injury-related mental health difficulties exists in a UK context. This study aimed to examine whether the Restore and Rebuild (R&R) treatment was feasible to deliver, acceptable and well tolerated by UK military veterans with moral injury related mental health difficulties.

Method: The R&R treatment was delivered to 20 patients who reported distress related to exposure to a morally injurious event(s) during military service. R&R is a 20-session psychotherapy with key themes of processing the event, self compassion, connecting with others and core values. Treatment was delivered online, weekly, one-to-one by a single therapist. Qualitative interviews with patients and the therapist who delivered R&R were conducted to explore acceptability and analysed using thematic analysis.

Results: Following treatment, patients experienced a significant reduction in symptoms of post-traumatic stress disorder, depression, alcohol misuse and moral injury related distress. R&R was found to be well tolerated by patients and improved their perceived wellbeing.

Conclusions: These results provide preliminary evidence that veterans struggling with moral injury related mental ill health can benefit from R&R treatment.

Restaurar Y Reconstruir (R&R) – un estudio piloto de viabilidad de una intervencion codiseñada para las dificultades de salud mental relacionadas con daño moral

Antecedentes: El daño moral puede tener un impacto negativo significativo en la salud mental, pero actualmente no existe un tratamiento validado para las dificultades de salud mental relacionadas con daño moral en el contexto del Reino Unido. El objetivo de este estudio fue examinar si el tratamiento Restaurar y Reconstruir (R&R) era factible de administrar, aceptable y bien tolerado para los veteranos militares del Reino Unido con dificultades de salud mental relacionadas con daño moral.

Método: El tratamiento R&R se administró a 20 pacientes que reportaron angustia relacionada con la exposición a evento(s) moralmente dañino(s) durante el servicio militar. R&R es una psicoterapia de 20 sesiones con temas claves de procesamiento del evento, autocompasión, conexión con los demás y valores fundamentales. El tratamiento se efectuó en línea, semanalmente, en forma individual por un solo terapeuta. Se realizaron entrevistas cualitativas con los pacientes y el terapeuta que proporcionó R&R para explorar la aceptabilidad y se analizaron mediante análisis temático.

Resultados: Después del tratamiento, los pacientes experimentaron una reducción significativa en los síntomas de trastorno por estrés postraumático, depresión, abuso de alcohol y angustia relacionada con daño moral. Se encontró que R&R era bien tolerada por los pacientes y mejoró su bienestar percibido.

Conclusiones: Estos resultados entregan evidencia preliminar de que los veteranos que luchan con problemas de salud mental relacionados con daño moral pueden beneficiarse del tratamiento R&R.

ARTICLE HISTORY

Received 28 April 2023

Revised 22 June 2023

Accepted 27 June 2023

KEYWORDS

moral injury; treatment; trauma; clinical; mental health; PTSD

PALABRAS CLAVE



daño moral; tratamiento; trauma; clínica; salud mental; TEPT


关键词

道德伤害; 治疗; 创伤; 临床; 心理健康; PTSD

HIGHLIGHTS

- Evidence before this study: Moral injury can negatively impact the mental health of military veterans. Currently no validated treatment for moral injury related mental health difficulties exists for UK military personnel/veterans.
- Added value of this study: Restore and Rebuild (R&R) is a co-designed psychotherapy for moral injury-related mental health difficulties. This study provides the first evidence that R&R treatment is associated with a significant improvement in patient symptoms of PTSD, depression, alcohol misuse and moral injury related distress. R&R was feasible to deliver, acceptable to patients and well tolerated.

CONTACT Victoria Williamson  victoria.williamson@kcl.ac.uk  Institute of Psychiatry, Psychology and Neuroscience, King's Centre for Military Health Research, King's College London, Weston Education Centre, 10 Cutcombe Road, London SE5 9RJ, UK

 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/20008066.2023.2256204>.

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

恢复和重建 (R&R) – 针对与道德伤害相关心理健康困难共同设计干预措施的可行性试点研究

背景: 道德伤害会对心理健康产生显著的负面影响, 但目前在英国还没有针对与道德伤害相关心理健康困难的有效治疗方法。本研究旨在探讨恢复与重建 (R&R) 治疗对于患有道德伤害相关心理健康问题的英国退伍军人来说是否可行、可接受和耐受良好。

方法: 对 20 名报告因服役期间遭受道德伤害事件而感到痛苦的患者进行了 R&R 治疗。R&R 是一种 20 疗程的心理治疗, 其关键主题是处理事件、自我同情、与他人联系和核心价值观。治疗由一名治疗师每周在线进行一对一的治疗。对患者和提供 R&R 的治疗师进行定性访谈, 以探索可接受性并使用主题分析进行分析。

结果: 治疗后, 患者的创伤后应激障碍、抑郁、酗酒和道德伤害相关的痛苦症状显著减轻。研究发现, 患者对 R&R 的耐受性良好, 并改善了他们的身心健康。

结论: 这些结果提供了初步证据, 表明患有与道德伤害相关心理健康疾患的退伍军人可以从 R&R 治疗中受益。

- Implications of all the available evidence: These results provide preliminary evidence that veterans struggling with moral injury related mental ill health can benefit from R&R treatment. With further evaluation, R&R may be beneficial to other occupational groups affected by moral injury.

1. Introduction

During military service, individuals may be exposed to potentially morally injurious events (PMIEs). These events violate an individuals' existing moral beliefs of self, world and others and typically involve acts of omission, commission or betrayal (Bonson et al., 2023a; King et al., 2023; Williamson, Murphy, Phelps, Forbes, et al., 2021). Most of the research to date has focused on moral injury in military context although moral injury has been reported in several non-military occupations. As an example of moral injury in a military setting; an act of omission may be witnessing a soldier mistreat a prisoner and not intervening to stop it, an act of commission may be shooting at a figure hiding in long grass, to then discover this is an innocent civilian or child (e.g. Bonson et al., 2023a; Jamieson et al., 2020; Jinkerson, 2016; Molen-dijk et al., 2022; Phelps et al., 2022). Finally, an act of betrayal may be being provided with faulty or insufficient equipment. Following exposure to a PMIE, some individuals develop a moral injury which is characterised by fundamental changes in relationship with self, others and the world (Bonson et al., 2023a), self-blame, difficulties with trust (Barnes et al., 2019) as well as intense feelings of guilt, shame and anger (Williamson, Murphy, Stevelink, et al., 2020). Those experiencing moral injury are at increased risk of post-traumatic stress disorder (PTSD), depression, alcohol misuse and suicidality compared to those who have not experienced PMIEs (Ames et al., 2019; Battles et al., 2019; Williamson et al., 2018).

Moral injury has been found to have a lasting impact on not only psychological health, but also spiritual, social, and daily functioning (Bonson et al., 2023a; Carey & Chaplaincy, 2018; Griffin et al., 2019; Molen-dijk et al., 2022). Pervasive feelings of guilt, shame and worthlessness can encourage a veteran with moral injury to withdraw from others and to not discuss the PMIE with anyone. This may lead to social disconnection and struggling on alone (Bonson et al., 2023a; Williamson, Murphy, Stevelink, Jones, et al., 2021).

Moral injury can also substantially impact both intra-personal and interpersonal values, leading to damaged relationships with both self and others (Atuel et al., 2021; Bonson et al., 2023a; Richardson et al., 2020). Individuals can come to believe that they do not deserve a good life after the PMIE, or they do not deserve to feel better (Litz et al., 2009) and engage in high levels of self-sabotaging and self-destructive behaviours (Currier et al., 2018). This negative impact of moral injury has been found in both military and non-military samples, including police, healthcare workers and journalists (Backholm & Idås, 2015; Čartolovni et al., 2021; Feinstein et al., 2018; Komarovskaya et al., 2011; Williamson, Lamb, et al., 2022).

At present, no validated treatment for moral injury-related mental health difficulties exists in a UK context. A study within the UK found that clinicians reported feeling a lack of confidence in treating cases of moral injury, in part, because of this lack of manualised treatment. Clinicians reported delivering treatments drawn from a number of different sources to find a good fit for morally injured patients (Williamson, Murphy, Stevelink, Allen, et al., 2021). While moral injury can often co-occur with PTSD (Koenig et al., 2019) and events can be simultaneously morally injurious and life threatening (Williamson, Murphy, Stevelink, et al., 2020), moral injury and PTSD are increasingly recognised as being distinctly different from each other in presentation (Barnes et al., 2019; Jordan et al., 2017; Nash & Litz, 2013; Phelps et al., 2022). Bryan et al. (2018) found military personnel who reported life-threat trauma were more likely to present with difficulties relating to flashbacks, exaggerated startle response and nightmares. Whereas the symptom profile of individuals struggling with moral injury is thought to include higher levels of anger, guilt, shame, depression, and social withdrawal (Griffin et al., 2019; Williamson, Murphy, Stevelink, et al., 2020). Furthermore, studies have found that different PMIEs (e.g. betrayal, perpetration, omission) may evoke particular responses; for example, Litz et al.

(2018) found that experiences of perpetration PMIEs were linked with higher levels of self-blame, re-experiencing and guilt compared to threat-based trauma. It has also been argued that standard PTSD treatments may not fully address the range of negative sequelae or distress experienced by individuals with moral injury (Maguen & Burkman, 2013; Steinmetz & Gray, 2015) with studies finding that some patients who received trauma-focused cognitive behavioural therapy (TF-CBT) did not find this treatment entirely helpful in addressing their moral injury-related symptoms of shame and guilt (Bonson et al., 2023b).

There are some treatments being developed for moral injury; although, these have only been evaluated with US military personnel/veterans. One such treatment is Adaptive Disclosure (Gray et al., 2012), which encourages emotional processing and examination of beliefs from traumatic experiences. Another treatment, The Impact of Killing (IOK) (Maguen et al., 2017) utilises cognitive appraisal techniques and considers the themes of forgiveness and self-forgiveness in moral injury. However, as the name suggests, IOK may not be applicable to a wide range of PMIE types experienced by most of those with moral injury, including military personnel with betrayal or omission experiences. Furthermore, UK and US veterans have different rules of engagement on deployment and have been shown to have differences in experiences and responses to trauma (Sundin et al., 2010; Sundin et al., 2014). Therefore, there is a need for a treatment for moral injury that considers the needs and experiences of UK veterans, and which ideally would be adaptable to other occupational groups.

In order to address this gap, the authors co-designed a treatment for moral injury in a pilot feasibility study (Williamson, Murphy, et al., 2022). The Restore and Rebuild (R&R) treatment is a 20-session psychological therapy that was co-designed with UK military veterans with lived experience and an international team of leading professionals in the field of moral injury. The aim of this mixed methods study was to examine if it was feasible to deliver R&R to UK veterans with moral injury-related mental health difficulties and investigate whether the treatment was perceived as acceptable and well tolerated by users.

2. Method

2.1 Ethical approval

Ethical approval was granted for this study by Kings College London Research Ethics Committee (HR-20\21-20850).

2.2 Treatment development

Medical Research Council (MRC) guidelines for complex intervention development were followed

(Skivington et al., 2021) and we used a person-based co-design approach to develop R&R (Mulvale et al., 2019). The protocol detailing the design and development of R&R has been published previously (Williamson, Murphy, et al., 2022). The R&R treatment was developed using three stages. This article describes the procedure and results of Stage 3 (see Williamson, Murphy, et al., 2022 for a full description).

As a brief outline, Stage 1 was a systematic review of the effectiveness of existing treatment approaches for the key symptoms of moral injury (i.e. guilt, shame, anger) in both civilian and military populations (Serfioti et al., 2022). Exposure-based approaches (e.g. Prolonged Exposure, Trauma Management Therapy) were found to be particularly effective at reducing shame and anger while cognitive processing therapy (CPT, Resick et al., 2016) was found to reduce guilt and anger symptoms. The results of this review informed our understanding of the existing validated treatment components that may be especially effective in cases of moral injury.

In Stage 2, qualitative interviews were conducted with leading professionals with extensive clinical, pastoral and research experience in moral injury (Serfioti et al., 2023). The purpose of these interviews was to draw on this expert body of knowledge and experience to better understand perceptions of the needs of morally injured patients and what effective approaches may be helpful. Recommendations from these interviews included providing a phase-based treatment in a non-judgmental environment, providing moral injury specific psychoeducation (e.g. therapy handouts), while also actively questioning individuals on their experience, potentially including a third party (e.g. spiritual leader) in treatment if appropriate, and focusing on improving patient's daily functioning (e.g. sleep, risk taking) (Serfioti et al., 2023). Interviews also highlighted the potential utility of approaches such as Acceptance and Commitment Therapy (ACT) (Gloster et al., 2020) and Compassion Focused Therapy (CFT) (Gilbert, 2014) to support individuals with moral injury to emotionally heal following PMIEs and encourage compassion towards themselves and others.

Information from Stage 1 and the interviews with professionals were compiled and a draft outline of the treatment was created. This proposed treatment outline was included in qualitative interviews conducted with UK veterans who experienced PMIEs (Bonson et al., 2023b). In these interviews, veterans reflected on their past experiences of moral injury treatment, what aspects of previous care were (or were not) experienced as helpful, potential barriers/facilitators to moral injury treatment, and their thoughts on the proposed treatment outline (Bonson et al., 2023b). Interviews with veterans highlighted the potential benefits of incorporating sessions focusing on one's core values and how to live a life

consistent with these values to address feelings of being a ‘bad’ person post-PMIE; using letter writing exercises to reflect on and emotionally process the PMIE; and including a close companion in the therapy space to share information about moral injury and their recovery process. Following these veteran interviews, the R&R treatment design and content was further refined and modified where necessary.

The finalised R&R treatment manual consisted of 20 sessions delivered online by a single therapist. This treatment was piloted in Stage 3 with 20 military veterans, with sessions taking place weekly, with the exception of the final session which takes place 4 weeks after Session 19. An outline of the R&R treatment is presented in Table 1. Early treatment sessions focused on formulation, review of life experiences including PMIE(s), providing psychoeducation on moral injury and emotional regulation and recounting the PMIE(s). The sessions then went on to focus on identifying problematic appraisals and thinking patterns and exploring personal values. Following this, the sessions then aimed to help veterans reframe significant belief system changes brought on or further influenced by PMIE and resultant moral injury. After these sessions, veterans were invited to share a session with a close companion, where their understanding of moral injury, their PMIE experience and future goals could be shared. The remaining sessions encouraged the patient to consider future directions in relationships with self (including forgiveness and self-forgiveness), others and living in accordance with values.

2.3 Recruitment

Participants in Stage 3 were recruited through a UK wide veterans mental health charity between September 2021–December 2022. Veterans who had contacted the charity for support completed a full

Table 1. R&R treatment session outline.

Session 1–2	Resource building	Formulation and emotional regulation strategies focused on building self-compassion.
Session 3–8	Focusing on the event	Recounting the PMIE through narrative exposure, evaluating response to the event and identifying stuck points.
Session 9–12	Moving on from the event	Cognitive re-structuring of core beliefs about self and others through exploration of key themes such as power and control, and trust.
Session 13–18	Rebuilding connections	Overcoming shame through sharing of PMIE narrative. Developing values-based goals to help rebuild a valued life and improve connections with others. Exploration of barriers to recovery. Integrating self-compassion into daily life.
Session 19–20	Ending	Reviewing progress, maintaining gains and future plan, signposting if further needs are identified.

clinical assessment with a clinician which was then presented at a local interdisciplinary team meeting where treatment pathways are decided. At this point, potential moral injury treatment needs were identified. If moral injury appeared to be the main presenting problem, the assessment information was sent to the pilot’s research therapist (AB), who screened assessment notes. If a veteran patient was potentially eligible, the research therapist contacted them for a brief screening telephone call. During this call, they provided the veteran with an outline of moral injury, what the R&R treatment pilot entailed and discussed with the veteran whether R&R seemed to be the most appropriate course of treatment. The research therapist was able to confirm treatment suitability through this screening call and identify any potential treatment barriers.

2.3.1 Inclusion and exclusion criteria

To be eligible to participate in the R&R treatment pilot, patients had to be a UK Armed Forces veterans, aged 18 years or more, currently receiving psychological treatment. In addition, it had to be determined by a clinician that moral injury-related mental ill-health was the main presenting difficulty which was ascertained by asking the veteran for a brief overview of their main difficulties, the type of event(s) the veteran felt led to this difficulty and what they were hoping to achieve through treatment. A definition of moral injury was provided to veterans screened (Litz et al., 2009) so that they were better able to understand the terminology used and how their experiences were in line with moral injury symptoms. Clinical assessment questions were guided by clinical expertise as well as existing measures of moral injury (e.g. Currier et al., 2015) where needed and the study team asked about both fear/threat based trauma as well as aspects of experiences which might indicate the potential to cause moral injury.

Individuals were excluded from the treatment pilot if they experienced significant speech or hearing difficulties, significant cognitive impairment, severe psychotic disorder, dissociative identity, severe mental health difficulty or significant current life stressors which would impede treatment engagement. Veterans who were actively deliberately self-harming or expressing significant suicidal ideation where they were at active risk of harm to themselves were also excluded, as well as veterans with ongoing alcohol or drug use disorder. Veterans were also excluded if they were unwilling to provide informed consent, began new trauma-focused individual therapy within the last three months or had planned concurrent treatment. Finally, if it was determined by clinician during screening that no moral injury was present, or if this was not the main presenting problem for the veteran, they would not be eligible for the treatment pilot. Ineligible veterans

for this pilot trial were provided with support to access alternative care within the mental health service.

2.4 Materials

2.4.1 Psychological outcome measures

Veteran patients were asked to complete self-report measures at baseline prior to starting R&R treatment sessions, post-treatment, one month and three months after treatment was completed. Demographic information (e.g. age, gender, years of military service, ethnicity, etc.) were also collected at baseline.

A measure of PTSD and moral injury were chosen as the primary outcome measures to explore if R&R was well tolerated. To measure PTSD, the PTSD Checklist for DSM-5 (PCL-5) was used (Bovin et al., 2016; Weathers et al., 1993). This is a validated 20-item measure that assesses the DSM-5 symptoms of PTSD and is widely used in trauma exposed populations internationally (Forkus et al., 2022). Items are scored on a five-point Likert scale and scores range between 0 and 80 with a cut off score of 38 used to indicate likely PTSD caseness. Previous studies show that the PCL-5 is a psychometrically sound measure of PTSD symptoms (Blevins et al., 2015).

Moral injury related distress was assessed via the Moral Injury Scale (MORIS, Williamson et al., [under review](#)). The MORIS is 21 item self-report questionnaire that has been validated for use in UK populations. There was no overlap between the present sample and the samples used to validate the MORIS. The MORIS consists of four subscales which measure PMIE exposure, time since event, moral injury related distress and potential risk and protective factors. Data from the MORIS moral injury related distress subscale were used in the present study. The moral injury related distress subscale consists of 8 items, rated on a 5-point Likert scale (0 = not at all) (4 = very much). Items on the subscale relate to post-PMIE experiences of personal change, guilt, shame, and anger, including items such as 'I often think about how the event(s) could or should have happened differently' and 'When I think about what happened, I want to harm or punish myself.' The moral injury related distress subscale has been found to have strong internal consistency ($\alpha = 0.87$). A cut off score of 12 has been suggested as an indicator of likely moral injury related distress.

Other measures utilised included the Alcohol Use Disorders Identification Test (AUDIT) (Babor et al., 2001) which is a well validated scale (de Meneses-Gaya et al., 2009) used to measure likely alcohol misuse. The AUDIT is a 10-item measure and a cut off score of 16 or more was used to indicate likely alcohol misuse. Patient depression was assessed using the Patient Health Questionnaire (PHQ-9) (Kroenke et al., 2001), a nine-item measure (possible total

score 0–27) which uses a Likert scale of 0 (not at all) to 3 (nearly every day). The PHQ-9 has been found to have good validity and reliability (Cameron et al., 2008; Kroenke et al., 2001; Wu et al., 2020) and a cut off score of ten or more was used to indicate likely depression (Manea et al., 2012). The Expressions of Moral Injury Scale- Military Version (EMIS-M) (Currier et al., 2018) was used to assess moral injury related distress. The EMIS is a 17-item scale for assessing beliefs and behaviours following PMIEs in a military context. Items are measured on a Likert scale (1 = strongly disagree, 5 = strongly agree) and the total possible score ranges from 17 to 85. While there is no recommended cut off score, higher scores are taken to indicate worse outcomes and maladaptive responses related to PMIEs. The EMIS has been validated for use in US military samples (Currier et al., 2015) and has been used in previous studies of moral injury in UK military veterans (Currier et al., 2021; Williamson, Greenberg, and Murphy, 2021).

2.5 Treatment delivery information

Data were collected regarding the number of R&R sessions patients attended, the number and nature of serious adverse events, the number of patients who dropped out after the first R&R session and any patients who were lost to follow up. Serious adverse events were defined according to the National Research Ethics Service Guidelines (Hull and East Yorkshire Hospitals NHS Trust, 2015).

2.5.1 Qualitative interviews

To gain an in-depth understanding of whether R&R was acceptable and well tolerated, all veterans taking part in the treatment pilot were invited to interview once during their treatment by VW. Prior to interviews, veterans were informed that their interviews would be anonymised with identifying information removed on transcription and their participation in the interview would not adversely impact the care they receive from the mental health charity other services. The one-to-one qualitative interviews were staggered, with interviews conducted after Session 5, 10, 15 or 20 to gather information on veteran's experience of treatment so far, what they had found helpful and what they had found challenging. The therapist for the treatment pilot was also interviewed within the first six months of delivering the treatment to understand their experience of treatment delivery.

The interview schedule ([Supplementary Material 1](#)) was informed by the research questions, the broader moral injury literature and previous qualitative studies of experiences of psychological treatment post-trauma (Litz et al., 2009; Nash & Litz, 2013; Purcell et al., 2018; Schorr et al., 2018; Williamson, Murphy, Stevelink, et al., 2020). Interviews focused on veterans'

experiences of accessing treatment, their perceptions of being offered a novel treatment for moral injury, their experience of receiving R&R, aspects of the R&R treatment that did/did not work well, the impact of R&R on their daily functioning and wellbeing, barriers and facilitators to treatment and perceptions of any outstanding support needs. Interview questions were open ended, inviting participants to reply in their own words. Interviews were conducted by telephone or MS teams and audio-recorded with consent. Interviews were transcribed verbatim, with audio recordings destroyed following transcription.

2.6 Data analysis

2.6.1 Quantitative data analysis

STATA 17 was used for data analysis. Descriptive statistics were calculated for baseline, follow up and change scores for outcome measures with paired t-tests used to test for significant changes in scores from baseline. Descriptive statistics were also used to examine the treatment delivery information (e.g. number of sessions attended, drop out, etc.) to evaluate feasibility.

2.6.2 Qualitative analysis

Two approaches were taken for data analysis: 'fast and direct' and 'slow and in-depth' (Williamson, Larkin, Reardon, Pearcey, et al., 2021). The 'fast and direct' approach involved researchers taking notes of any key observations during the interviews, with notes collated and shared with the broader research team and, where necessary, used to rapidly alter the R&R treatment procedures. An example of a rapid alteration made included the revision of a title of a worksheet where veteran feedback suggested it could be framed more positively. The 'slow and in-depth approach' utilised thematic analysis as recommended by Braun and Clarke (Braun & Clarke, 2006). This analytic approach first required researchers to be familiar with the data, re-reading transcripts several times. The primary author (VW) then used an inductive approach to generate initial codes, searched for and created early themes, and finally revised themes. Data collection and both forms of analysis took place at the same time, allowing developing topics of interest to be explored in subsequent interviews and to determine if thematic saturation had been reached (Hennink et al., 2017). Peer debriefing was regularly used, with feedback sought from co-authors (DM, VA & NG) who have several years of expertise in moral injury and clinical treatment. To ensure reflexivity, a reflexive journal was kept by the primary author (VW) to note the influence of their own views, assumptions and experiences to prevent premature or biased data interpretation (Campbell et al., 2021).

3. Results

3.1 Quantitative findings

The 20 participants were 45 years old on average (SD 9.2) and the majority (90%, $n = 18$) were male. All were White British and served in the Armed Forces, across branches, for an average of 13 years (SD 6.12). Demographic information can be found in Table 2.

None of the 20 participants who enrolled in the R&R treatment dropped out of sessions (see Table 3) and all patients attended all 20 of the R&R treatment sessions, with only one participant lost to follow up. Veteran participants experienced a significant mean improvement for all total scores on the primary outcome measures, apart from the EMIS. The mean change for each of the primary outcomes is presented in Table 4.

3.2 Qualitative findings

Two core themes and several sub-themes are reported here. These themes reflected how veteran patients experienced (i) their feelings and responses to R&R therapy, and (ii) their perceptions of adaptations needed to R&R to improve acceptability. Anonymised quotes are provided in Table 5 to illustrate findings.

3.3 Experiences of receiving R&R treatment

3.3.1 Re-evaluation of the event, in context and one's role

During the course of R&R treatment, veterans were invited to recount the PMIE and other challenging events in discussions with the therapist, a timeline and letter writing exercises. Veterans described that these sessions and exercises provided the opportunity to be fully honest about their experience, helping them to remember aspects that they had forgotten or overlooked, and to look at the event from a more compassionate 'outsider' perspective. Treatment that incorporated processing of the PMIE memory from outsider, or allocentric, perspective was considered a key therapeutic approach by the interviewed therapist.

Revisiting the memory of the event in this R&R treatment process was experienced as difficult but cathartic, with many veterans describing a reduction in their feelings of self-blame, guilt and rumination. The written letters and timeline exercises were materials veterans reported that they would return to and reflect on their progress should they experience difficulties in the future. Several veterans reported that the disclosure of the PMIE in therapy was the first time that they had told anyone of the event or their reactions to it and disclosure was a relief.

Table 2. Participant demographic information.

Index	Total sample (n = 20)
Mean age, M (SD)	45.15 (9.17)
Male, n(%)	18 (90%)
Marital status, n(%)	
Single	2 (10%)
Married/living with a partner	15 (75%)
Divorced/separated	3 (15%)
Education attainment, n(%)	
School until 18 years	3 (15%)
Further education	11 (55%)
Higher education (BSc)	3 (15%)
Masters/doctoral degree	3 (15%)
Branch, n(%)	
British Army	14 (70%)
Royal Airforce	2 (10%)
Royal Marines/Royal Navy	4 (20%)
Length of service, M(SD)	12.65 (6.12)
Number of times deployed, M(SD)	4.55 (2.25)
Years since left the military, M(SD)	13.5 (10.69)

Table 3. Patient treatment attendance information.

Outcome	N (%)
Drop out after first session	0 (0.0%)
Number of R&R sessions attended	20 (100.0%)
1-month follow up attenders	20 (100.0%)
3-month follow up attenders	19 (95.0%)
Adverse events	0 (0.0%)

Note: Number of R&R sessions attended = there are 20 sessions in the R&R treatment manual.

3.3.2 Increased self-compassion and use of adaptive coping strategies

Another aspect of treatment veterans described as being extremely beneficial was the ongoing self-compassionate focus of sessions. It was helpful to receive encouragement and support to incorporate dedicated time for themselves in the week (e.g. to meditate, to practice a hobby, exercise) as well as making compassionate lifestyle changes, including reducing long working hours to be more manageable, setting boundaries, and revisiting the division of family responsibilities.

Veterans described that they found a number of the coping strategies for emotional self-regulation taught

in R&R to be helpful in managing their distress, including breathing techniques. Through treatment, veterans reported experiencing greater self-compassion and were less harsh or punishing towards themselves. Veterans described how they had become to feel more accepting of difficult emotions, such as anger or anxiety, when these arose and reported being better able to reflect on their thoughts, feelings and behaviours to understand and manage these feelings.

3.3.3 Experiencing improved social connections

Towards the end of treatment, an R&R session includes the option of having a close companion (e.g. spouse, parent, trusted friend) attend. Veterans described how, prior to this session, they and the therapist carefully discussed what goals they had for the session, including what information they did/did not want to discuss with their close companion and how they wanted to share it. Many veterans reported finding this close companion session extremely helpful as it was considered an opportunity to discuss the PMIE and their psychological distress with a significant other in a safe, structured way and this session reportedly improved their companion's understanding of moral injury, R&R treatment and the difficulties they had been facing.

Similarly, the therapist described how this session provided veterans with the opportunity to practice discussing the PMIE with others in a contained way – as many veteran patients had difficulties sharing their PMIE experience – and a supportive response from a close companion was very therapeutic and de-shaming. Several veterans described how, following this session, they went on to have more open discussions with their companion outside of treatment about their difficulties and felt more able to approach their companion for support when needed. Six veterans who chose

Table 4. Sample outcomes at baseline, 1-month and 3-months post treatment.

Baseline	Met case criteria, n(%)	Mean score (SD)	Mean change from baseline (95% CI)	t-test P value
PTSD	19 (95.0%)	69.5 (15.3)	–	–
Alcohol misuse ^a	17 (100.0%)	21.8 (2.7)	–	–
Depression	20 (100.0%)	23.65 (6.70)	–	–
MORIS ^b	15 (83.3)	17.6 (6.7)	–	–
EMIS ^c	n/a	56.6 (12.6)	–	–
1-month follow up				
PTSD	10 (50.0%)	34.85 (19.07)	34.65 (23.6–45.71)	<0.001
Alcohol misuse ^b	8 (44.4%)	12.11 (8.07)	9.07 (4.88–13.25)	0.001
Depression	13 (65.0%)	11.30 (7.36)	12.35 (7.85–16.85)	<0.001
MORIS	8 (40%)	9.35 (5.96)	8.26 (4.10–12.42)	0.001
EMIS ^b	n/a	50.0 (11.47)	6.63 (–1.42 to 14.68)	0.10
3-month follow up ^c				
PTSD ^c	4 (21.1%)	30.63 (16.70)	38.87 (28.5–49.25)	<0.001
Alcohol misuse ^b	4 (22.2%)	8.66 (7.52)	12.51 (8.58–16.44)	<0.001
Depression ^c	8 (42.11%)	8.84 (5.04)	14.81 (10.95–18.67)	<0.001
MORIS ^d	4 (25.0%)	8.56 (5.18)	9.05 (4.83–13.26)	0.001
EMIS ^c	n/a	52.63 (12.34)	4.0 (–4.19 to 12.2)	0.33

Note: Total N = 20. a = data missing for 3 participants. b = data missing for 2 participants. c = data missing for 1 participant. d = data missing for 4 participants. n/a = not applicable. PTSD = measured via PCL-5 (Weathers et al., 1993). Depression = measured by PHQ-9 (Kroenke et al., 2001). Alcohol misuse = measured via AUDIT (Babor et al., 2001). MORIS = Moral Injury Scale (Williamson et al., under review). EMIS = Expressions of Moral Injury Scale (Currier et al., 2015).

Table 5. Illustrative quotations supporting themes and subthemes of thematic analysis.

Theme & sub-themes	Quote
Experiences of receiving R&R treatment Re-evaluation of the event, in context and one's role	<p>Veteran: <i>That letter writing thing for me was me getting a grip of myself and writing down stuff that I really didn't want to write down. I really didn't want [the therapist] or other people to hear about this because I was horrified about my own thoughts and feelings at that time. But I want to get better, so you have to, it's just a hurdle to get over isn't it. I knew this treatment wasn't going to be easy, it was just like you know what [the event happened], I've unlocked it, it gets written down. It was by far probably the most effective thing ... of all the exercises that I've done so far. (Male 005)</i></p> <p>Therapist: <i>I think there is something really important ... about allocentric versus egocentric memory processing with moral injury ... There is something ... so helpful, rather than having that memory of ... 'I was directing the drone, and this is what I could smell and ... see' ... Being able to look at it from an outside perspective and see the way that guy was being treated and ... having to make a quick decision. There is something really important ... about being able to look at it from ... an outsider perspective it's been really helpful.</i></p>
Increased self-compassion and use of adaptive coping strategies.	<p>Veteran: <i>The memories will still be in my mind, but I've accepted it now and know how to deal with it as far as I'm concerned. ... Because they happened, simple as that, but ... it's just horrible pictures that you keep in your mind. I just blame myself for, well I did, I don't anymore. (Male, 017)</i></p> <p>Veteran: <i>We talked a lot about perfectionism and that fear of failure ... I feel less stressed [now] ... I have also changed my hours ... so I give myself more time ... it's partly to do with the way that you think about things, but partly to do with the recognition of actually it's acceptable to give yourself time and therefore I could change my days. It doesn't have to be me who is back to get the kids. My husband can do it on a certain day, so let him do it. I don't feel like I have to do everything all the time. (Female, 015).</i></p> <p>Veteran: <i>[The therapist] went through [my] average days and ... [asked] when I take time for myself [for] reading which I enjoy doing, I like[to] paint, I like doing all sorts of different things, but I never fitted them in. [The therapist] was like try and fit them in. Start with 15, 20 min, half an hour ... She was just encouraging me to think of myself and don't be too hard on myself. If I've had a hard day there's nothing wrong with ... taking that time to rest ... It was just some really good advice throughout to be fair that I've never really thought about. (Male, 020)</i></p>
Experiencing improved social connections	<p>Veteran: <i>I think [the companion session] sits perfectly, you are beyond halfway through the course so obviously I'm confident by that stage with talking to [the therapist], I've got trust in her ... I was comfortable with it, and I think the way that it was structured, the way that me and [the therapist] built a plan before we came into [the session] ... so I knew how things were going and I think it worked well. The only thing I was nervous about was just reactions from my wife because there's stuff that I've told nobody before ... So I've opened up a lot more ... and just talk more in depth ... over the things that I think have affected me and why they've affected me. (Male 010)</i></p> <p>Therapist: <i>What we did instead [of having a companion attend] was we used the session to write a ... letter ... [the veteran] had children ... and they were saying 'well if my children ask me about moral injury or my sessions in the future what would I want to tell them?' So that's what we covered in the session, and it was ... what you'd want to include in the letter, what you wouldn't want to include ... how you want to explain what we've covered in the therapy. It was ... almost like having the close companion there, but it was just having it in written format instead ... I think the close companion session is important because it gives someone the tools to be able to explain it to someone else if they want to in a containable way.</i></p> <p>Veteran: <i>[I'm] talking loads more with my wife about it. I've become quite passive, quite calm within stuff, I'm reacting to the children a little bit less ... I am able to put that on to conversations with the kids and open up a little bit more and just be a little bit kinder to myself. I think they can see a softness within me ... Conversations are getting better, softer and more understanding since starting this [treatment], which is fantastic.</i></p>
Re-evaluation of values.	<p>Veteran: <i>To me it's all about making, I wouldn't say a better me but getting myself to a place I want to be ... my values standards have pretty much been set by the Army ... [So] that [values] session was probably one of the strongest and most important for me especially to learn ... to look at what these values and standards mean in everyday life and to be able to say 'well actually I don't need that value anymore' ... and to actually pick ones that you wanted to move forward with ... and look at what I need now to be happy. (Male 010).</i></p>
Aspects of R&R that could be improved or altered.	<p>Veteran: <i>[Online] it's convenient really ... some people might find it's not as personable, but I think it is having that person up on the screen is just as effective as being sat there face to face. I think I'd find the sessions a little bit harder maybe in person because I'd be a little bit more guarded. You potentially wouldn't [open] up as much because of this person that I am, the person that I profess to be ... and I should be not breaking down in front of people. Whereas over Teams ... I've been able to open up a little bit more (Male, 005)</i></p> <p>Veteran: <i>I don't know whether there could have been just a bespoke [information sheet] ... because when all the information is written down, it's directed at me whereas ... it would be good to have a little guide that explains to [partners] ... about moral injury and explains about the treatment process and then also maybe how they can support during the treatment and look after themselves ... Whereas if he had a resource that was from yourselves, and it was specific to the [R&R] course then that might be helpful. (Female, 003)</i></p> <p>Veteran: <i>So, the one thing that I have struggled with is some of the paperwork ... I'm slightly dyslexic and ... If I wanted to do this course in the future it would be amazing if you've got some kind of [materials] ... that somebody can click on a link and you've actually got the voice of your therapist. (Male 009)</i></p> <p>Therapist: <i>I think in terms of working with the moral injury itself I haven't come across anything yet which has been left out but, realistically, working with a veteran population in particular – a lot of the veterans I'm working with have multiple other PTSD events that aren't morally injurious and they sometimes need help with those bits afterwards ... So yes, there have been bits that have been left over but they've been from the PTSD ... presentations rather than the moral injury side of things themselves.</i></p>

not to include a close companion (i.e. due to relationship breakdowns, difficulties arranging a time where the companion could attend), instead used the session to describe what they would say to a companion about their PMIE and reported that this was also cathartic and helpful.

Beyond the inclusion of a close companion, veterans described experiencing improvements in social connectedness in other ways. Several veterans described that due to their past PMIEs, they identified as 'perfectionists' with a deep fear of failure and situations where they felt out of control. Veterans described receiving support during R&R to try small experiments (e.g. to not plan a weekend in advance, to try a new hobby) and reflecting on this experience and their feelings. This was reportedly very beneficial in building their confidence but also their connections with others. As detailed in the previous theme, as veterans reported feeling more accepting of difficult feelings and developing adaptive coping strategies, they also described how their relationships with friends and family members had improved over the course of R&R treatment, they spent more quality time together and they felt more able to share how they were feeling.

3.3.4 Re-evaluation of values

Throughout treatment, veterans were encouraged to evaluate their core values. Veterans described how they examined their pre-PMIE values, which were often values instilled during military service, and whether these values were still meaningful to them now or whether amendments were needed. Examining one's current values was reported by veterans as an important part of being more self-aware. Carefully considering one's core values also helped veterans to think about their future in a more positive way by actively reflecting on ways to behave and respond to others in line with their values. They described how this values-based work also served to increase empathy as they were more able to consider how others may hold different values which shape their actions/responses.

3.3.5 Aspects of R&R that could be improved or altered

Most veterans described that they felt that 20 was the right number of sessions as it provided enough time to discuss and address their PMIE and moral injury related symptoms in detail. Many also felt that therapy delivered online allowed them to be more vulnerable and open than in person and online treatment meant they did not have to take time off of work or travel long distances.

Veterans described the importance of the time taken by the therapist in the early sessions to build rapport and trust. While veterans reported that they

preferred the one-to-one nature of the R&R treatment, they did describe how they would have valued additional opportunities to receive peer support, with several veterans going on to access the peer support programmes available at the mental health charity after finishing R&R treatment. Veterans suggested that future trials could include more information about how R&R had been co-designed with military veterans – as this would foster confidence and trust in the therapy – the inclusion of information about the R&R treatment appropriate for families. It was also suggested that future trials could provide information and materials in alternative formats to be more accessible to individuals with special educational needs (e.g. including more infographics or audio recordings of text). Finally, the therapist and a small number of veterans described how despite experiencing significant improvements in their PMIE difficulties and reductions in feelings of shame, anger and guilt, these veterans did have some difficulties following R&R treatment – such as fears of loud noises – which were not considered to be necessarily linked to the PMIE specifically but other non-morally injurious traumatic events. It was described that these difficulties would likely require further support from other services available at the mental health charity.

4. Discussion

The aim of this study was to examine how the co-designed R&R treatment was experienced by patients, whether it was perceived as acceptable, well tolerated and feasible. Three key findings were observed. First, all patients attended all R&R treatment sessions with no dropouts and no serious adverse events. Second, statistically significant reductions in PTSD, depression, moral injury-related distress and alcohol misuse were observed at 1-month and 3-months post-treatment compared to pre-treatment baseline. Third, patients told us that they experienced R&R as beneficial and reported positive changes in their perceptions of the PMIE, increased self-compassion, improved social connections and greater use of adaptive coping strategies.

A common challenge faced by trauma-focused treatment trials for military personnel/veterans is the high rates of treatment drop out, which are often higher than civilian trials (Edwards-Stewart et al., 2021; Hoge et al., 2014). The published literature highlights that military veterans report dropping out of treatment because of perceived PTSD treatment ineffectiveness, work interference, confidentiality concerns, insufficient time with a therapist, and stigma related concerns (Hoge et al., 2014). Previous studies have also found that some veterans with moral injury can experience manualised trauma-focused PTSD treatments as inadequate as these treatments do not

fully address their distress following PMIEs (Bonson et al., 2023b). No participants dropped out of treatment, and only one participant was lost to follow up in this pilot feasibility study which suggests that R&R is feasible for delivery in its current format. At present, health services in the UK typically offer between 8 and 12 trauma focused sessions for PTSD (National Institute for Clinical Excellence (NICE), 2018), with additional sessions provided in cases of multiple or complex trauma (Brewin, 2020; Karatzias et al., 2017; Karatzias et al., 2019). The number of R&R sessions is consistent with existing approaches for treating Complex PTSD (Brewin, 2020; Brewin et al., 2017; Duffy & Ehlers, 2023). Qualitative interviews indicate that R&R was also considered acceptable and well tolerated by veteran patients. That no adverse events were reported suggested that R&R is unlikely to cause harm. Additional research is needed to compare patient engagement with R&R and treatment as usual for moral injury-related mental health difficulties, to better understand how patients engage with and tolerate R&R and whether R&R may be a superior treatment option for those with moral injuries.

Patients who received R&R treatment reported a significant reduction in their symptoms of PTSD, depression, and alcohol misuse. A statistically significant reduction in moral injury-related distress as measured by the MORIS, a moral injury screening tool developed for use in UK samples (Williamson et al., *under review*), was also found. However, no statistically significant changes were observed in patient expressions of moral distress post-treatment as measured by the EMIS (Currier et al., 2018). There have been some noted methodological problems with the EMIS as several EMIS items measure both transgressive acts and effects (i.e. 'I sometimes lash out at others because I feel bad about things I did/saw in the military'). Assessing both the cause and effect in the same item suggests a connection between the two that may not be present (Frankfurt & Frazier, 2016). The MORIS assesses event exposure separately from moral injury related distress. Further, the EMIS was developed to understand the ways in which moral injury symptoms are expressed, rather than explicitly measuring reductions in symptoms of moral injury. It is also possible that a lack of significant change in EMIS scores indicates that some patients continued to experience some PMIE-related distress post-treatment, although the qualitative findings suggested that ongoing psychological difficulties post-treatment largely related to re-experiencing symptoms. It may be useful to include validated measures specifically designed to assess symptoms of shame, guilt and anger post-trauma (e.g. Trauma-related Guilt Inventory, Kubany et al. (1996)) to better

understand patient outcomes in future evaluations of R&R. Nonetheless, that patients consistently reported a significant reduction in PTSD, depression and alcohol misuse symptoms following treatment via R&R is promising and indicates that R&R may be an effective treatment with benefits of the therapy maintained three months post-treatment.

The qualitative results of this study highlight that patient experiences of the R&R treatment were largely positive. Previous studies have found that individuals who experience moral injury often struggle with intense feelings of guilt, shame and anger, report a breaking down in their relationships with others, and engage in self-punishing and risk-taking behaviours to cope with their distress (Bonson et al., 2023a). That veterans described an improvement in areas that have been conceptualised to be important in moral injury recovery (Litz et al., 2009; Maguen et al., 2017; Nash & Litz, 2013; Phelps et al., 2022) – namely, their moral injury-related symptoms, improvements in social connectedness, greater self-compassion and use of adaptive coping strategies – suggests that R&R was helpful and acceptable to patients. A key challenge found in previous studies investigating the treatment of patients with moral injury has been that patients experience difficulties disclosing the PMIE and their associated distress during therapy (Williamson, Murphy, Stevelink, Allen, et al., 2021). That patients who received R&R reported feeling able to disclose the event and their feelings to the therapist, and to a close companion in some cases, and the experience of disclosure as beneficial is also promising. Furthermore, patients identified several areas of the R&R treatment process that could be improved (i.e. using infographics, audio recordings of text). These recommendations would be straightforward to accommodate (i.e. including more infographics in future information sheets) and may not only increase the acceptability of R&R in future evaluations but may also be useful for other studies aiming to develop acceptable treatments for trauma-exposed samples.

4.1 Strengths and limitations

This study has a number of strengths and limitations. First, the study included both male and female veterans from all branches of the UK military. The demographic characteristics of this study's participants are broadly consistent with previous studies of UK treatment seeking veterans with complex needs (Murphy et al., 2021; Murphy & Busuttil, 2019; Williamson, Baumann, et al., 2022; Williamson, Greenberg, & Murphy, 2021). Second, we assessed veteran outcomes at a number of points (i.e. one month and three months post-treatment) and included qualitative

interviews to better understand veteran patient's lived experiences of receiving treatment. Nonetheless, future evaluations of R&R should include longer follow up to ensure that treatment outcomes are maintained and examine whether patients go on to require any additional support.

A limitation of the present study is, despite evidence that patient symptoms improved post-treatment, without a control or comparison group it is not possible to determine at this stage how much of a reduction in symptoms is due to R&R. Second, given the design of the current trial, it was not powered to detect significant reductions in health outcomes, but rather to explore the feasibility of offering R&R. As a phase 1 pilot feasibility study, it was beyond the scope of this study to include a control or comparison group. A randomised control trial is needed to compare R&R to the treatments currently offered to veterans with moral injury related mental health difficulties to better understand R&R's efficacy. Third, it was also beyond the scope of this preliminary, exploratory study to include veteran patients reporting suicidal ideation or active self-harm. As experiences of PMIEs have been linked to suicidality (Ames et al., 2019; Williamson et al., 2018), whether R&R may be beneficial in future to patients presenting with suicidal ideation/self-harm is another factor which requires consideration in future evaluations. Fourth, some treatments developed for moral injury use a group-based model (e.g. IOK Maguen et al., 2017) or include support from a spiritual leader (Cenkner et al., 2021). Whether it is possible to adapt R&R for a group format or include the option to involve a spiritual leader in future warrants further exploration. Finally, future studies should also utilise diagnostic interviews which are the gold standard, rather than self-report measures of mental health outcomes that were used in the present study.

5. Conclusions

This study presents some of the first evidence of an acceptable, well tolerated treatment for moral injury related mental health difficulties for UK military veterans. Patients who received the R&R treatment, delivered one-to-one online, reported a significant reduction in PTSD, depression, alcohol misuse and moral injury related symptoms compared to baseline. Given that patients found the treatment acceptable, helpful and feasible, once R&R is further evaluated, it may be possible to recommend this treatment to UK veterans who have experienced PMIEs during military service and suffer with moral injury. Whether R&R may be beneficial to other non-military groups who struggle with moral injury should be investigated.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by Forces in Mind Trust [grant number FiMT17/0920E] for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work. Prof Dominic Murphy is a trustee for the funder of this project, the Forces in Mind Trust.. The funder did not have a role in the design of the study, data analysis, writing of the manuscript or submission of this article.

Ethics approval

This study was approved by King's College London research ethics committee HR-20/21-20850

Patient consent statement

Written informed consent for participation in this study was secured from all participants.

Data availability statement

The data that support the findings of this study are available from the corresponding author (VW), upon reasonable request. The data are not publicly available due to privacy and ethical restrictions (i.e. containing information that could compromise the privacy of research participants).

ORCID

Victoria Williamson  <http://orcid.org/0000-0002-3110-9856>

References

- Ames, D., Erickson, Z., Youssef, N. A., Arnold, I., Adamson, C. S., Sones, A. C., Yin, J., Haynes, K., Volk, F., Teng, E. J., Oliver, J. P., & Koenig, H. G. (2019). Moral injury, religiosity, and suicide risk in U.S. veterans and active duty military with PTSD symptoms. *Military Medicine*, 184 (3–4), e271. <https://doi.org/10.1093/milmed/usy148>
- Atuel, H. R., Barr, N., Jones, E., Greenberg, N., Williamson, V., Schumacher, M. R., Vermetten, E., Jetly, R., & Castro, C. A. (2021, April 29). Understanding moral injury from a character domain perspective. *Journal of Theoretical and Philosophical Psychology*, Published online first. <https://doi.org/10.1037/teo0000161>
- Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). *AUDIT-The Alcohol Use Disorders Identification Test – Guidelines for use in primary care*. <https://doi.org/10.1177/0269881110393051>
- Backholm, K., & Idås, T. (2015). Ethical dilemmas, work-related guilt, and posttraumatic stress reactions of news journalists covering the terror attack in Norway in 2011. *Journal of Traumatic Stress*, 28(2), 142–148. <https://doi.org/10.1002/jts.22001>

- Barnes, H. A., Hurley, R. A., & Taber, K. H. (2019). Moral injury and PTSD: Often co-occurring yet mechanistically different. *Journal of Neuropsychiatry and Clinical Neurosciences*, 31(2), A4–103. <https://doi.org/10.1176/APPI.NEUROPSYCH.19020036/ASSET/IMAGES/LARGE/APPI.NEUROPSYCH.19020036F3.JPG>
- Battles, A. R., Kelley, M. L., Jinkerson, J. D., C. Hamrick, H., & F. Hollis, B. (2019). Associations among exposure to potentially morally injurious experiences, spiritual injury, and alcohol use among combat veterans. *Journal of Traumatic Stress*, 32(3), 405–413. <https://doi.org/10.1002/jts.22404>
- Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress*, 28(6), 489–498. <https://doi.org/10.1002/jts.22059>
- Bonson, A., Murphy, D., Aldridge, V., Greenberg, N., & Williamson, V. (2023a). Conceptualization of moral injury: A socio-cognitive perspective. *Journal of Military, Veteran and Family Health*. <https://doi.org/10.3138/jmvfh-2022-0034>
- Bonson, A., Murphy, D., Aldridge, V., Greenberg, N., & Williamson, V. (2023b). Veterans' experiences of moral injury, treatment and recommendations for future support. *BMJ Military Health*, e002332. <https://doi.org/10.1136/MILITARY-2022-002332>
- Bovin, M. J., Marx, B. P., Weathers, F. W., Gallagher, M. W., Rodriguez, P., Schnurr, P. P., & Keane, T. M. (2016). Psychometric properties of the PTSD checklist for diagnostic and statistical manual of mental disorders-fifth edition (PCL-5) in veterans. *Psychological Assessment*, 28(11), 1379–1391. <https://doi.org/10.1037/PAS0000254>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brewin, C. R. (2020). Complex post-traumatic stress disorder: A new diagnosis in ICD-11. *BJPsych Advances*, 26(3). <https://doi.org/10.1192/bja.2019.48>
- Brewin, C. R., Cloitre, M., Hyland, P., Shevlin, M., Maercker, A., Bryant, R. A., Humayun, A., Jones, L. M., Kagee, A., Rousseau, C., Somasundaram, D., Suzuki, Y., Wessely, S., van Ommeren, M., & Reed, G. M. (2017). A review of current evidence regarding the ICD-11 proposals for diagnosing PTSD and complex PTSD. *Clinical Psychology Review*, 58. <https://doi.org/10.1016/j.cpr.2017.09.001>
- Bryan, C. J., Bryan, A. O., Roberge, E., Leifker, F. R., & Rozek, D. C. (2018). Moral injury, posttraumatic stress disorder, and suicidal behavior among National Guard personnel. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(1), 36–45. <https://doi.org/10.1037/tra0000290>
- Cameron, I. M., Crawford, J. R., Lawton, K., & Reid, I. C. (2008). Psychometric comparison of PHQ-9 and HADS for measuring depression severity in primary care. *British Journal of General Practice*, 58(546). <https://doi.org/10.3399/bjgp08X263794>
- Campbell, K. A., Orr, E., Durepos, P., Nguyen, L., Li, L., Whitmore, C., Gehrke, P., Graham, L., & Jack, S. (2021). Reflexive thematic analysis for applied qualitative health research. *The Qualitative Report*, 26. <https://doi.org/10.46743/2160-3715/2021.5010>
- Carey, L. B., & Chaplaincy, H. T. (2018). Chaplaincy, spiritual care and moral injury: Considerations regarding screening and treatment. *Frontiers in Psychiatry*, 9(619). <https://doi.org/10.3389/fpsy.2018.00619>
- Čartolovni, A., Stolt, M., Scott, P. A., & Suhonen, R. (2021). Moral injury in healthcare professionals: A scoping review and discussion. *Nursing Ethics*, 28(5), 590–602. <https://doi.org/10.1177/0969733020966776>
- Cenkner, D. P., Yeomans, P. D., Antal, C. J., & Scott, J. C. (2021). A pilot study of a moral injury group intervention co-facilitated by a Chaplain and psychologist. *Journal of Traumatic Stress*, 34(2). <https://doi.org/10.1002/jts.22642>
- Currier, J. M., Farnsworth, J. K., Drescher, K. D., McDermott, R. C., Sims, B. M., & Albright, D. L. (2018). Development and evaluation of the expressions of moral injury scale-military version. *Clinical Psychology & Psychotherapy*, 25(3), 474–488. <https://doi.org/10.1002/cpp.2170>
- Currier, J. M., Foster, J. D., Karatzias, T., & Murphy, D. (2021). Moral injury and ICD-11 complex PTSD (CPTSD) symptoms among treatment-seeking veterans in the United Kingdom. *Psychological Trauma: Theory, Research, Practice, and Policy*, 13(4), 417–421. <https://doi.org/10.1037/TRA0000921>
- Currier, J. M., Holland, J. M., Drescher, K., & Foy, D. (2015). Initial psychometric evaluation of the moral injury questionnaire-military version. *Clinical Psychology & Psychotherapy*, 22(1), 54–63. <https://doi.org/10.1002/cpp.1866>
- de Meneses-Gaya, C., Zuardi, A. W., Loureiro, S. R., & Crippa, J. A. S. (2009). Alcohol Use Disorders Identification Test (AUDIT): An updated systematic review of psychometric properties. *Psychology & Neuroscience*, 2(1). <https://doi.org/10.3922/j.psns.2009.1.12>
- Duffy, M., & Ehlers, A. (2023). Does a phased approach enhance outcomes for trauma-focused cognitive therapy for complex posttraumatic stress disorder? <https://www.isrctn.com/ISRCTN13869856>
- Edwards-Stewart, A., Smolenski, D. J., Bush, N. E., Cyr, B., Beech, E. H., Skopp, N. A., & Belsher, B. E. (2021). Posttraumatic stress disorder treatment dropout among military and veteran populations: A systematic review and meta-analysis. *Journal of Traumatic Stress*, 34(4). <https://doi.org/10.1002/jts.22653>
- Feinstein, A., Pavisian, B., & Storm, H. (2018). Journalists covering the refugee and migration crisis are affected by moral injury not PTSD. *JRSM Open*, 9(3), 2054270418759010. <https://doi.org/10.1177/2054270418759010>
- Forkus, S. R., Raudales, A. M., Rafiuddin, H. S., Weiss, N. H., Messman, B. A., & Contractor, A. A. (2022). The Posttraumatic Stress Disorder (PTSD) checklist for DSM-5: A systematic review of existing psychometric evidence. *Clinical Psychology: Science and Practice*. <https://doi.org/10.1037/CPS0000111>
- Frankfurt, S., & Frazier, P. (2016). A review of research on moral injury in combat veterans. *Military Psychology*, 28(5), 318–330. <https://doi.org/10.1037/MIL0000132>
- Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53(1), 6–41. <https://doi.org/10.1111/bjc.12043>
- Gloster, A. T., Walder, N., Levin, M. E., Twohig, M. P., & Karekla, M. (2020). The empirical status of acceptance and commitment therapy: A review of meta-analyses. *Journal of Contextual Behavioral Science*, 18. <https://doi.org/10.1016/j.jcbs.2020.09.009>
- Gray, M. J., Schorr, Y., Nash, W., Lebowitz, L., Amidon, A., Lansing, A., Maglione, M., Lang, A. J., & Litz, B. T. (2012). Adaptive disclosure: An open trial of a novel exposure-based intervention for service members with combat-related psychological stress injuries. *Behavior Therapy*, 43(2), 407–415. <https://doi.org/10.1016/J.BETH.2011.09.001>
- Griffin, B. J., Purcell, N., Burkman, K., Litz, B. T., Bryan, C. J., Schmitz, M., Villierme, C., Walsh, J., & Maguen, S. (2019).

- Moral injury: An integrative review. *Journal of Traumatic Stress*, 32(3), 350–362. <https://doi.org/10.1002/JTS.22362>
- Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation. *Qualitative Health Research*, 27(4), 591–608. <https://doi.org/10.1177/1049732316665344>
- Hoge, C. W., Grossman, S. H., Auchterlonie, J. L., Riviere, L. A., Milliken, C. S., & Wilk, J. E. (2014). PTSD treatment for soldiers after combat deployment: Low utilization of offmental health care and reasons for dropout. *Psychiatric Services*, 65. <https://doi.org/10.1176/appi.ps.201300307>
- Hull and East Yorkshire Hospitals NHS Trust. (2015). *A handbook for researchers involved in non-CTIMP studies*. <https://www.hey.nhs.uk/wp/wp-content/uploads/2016/03/nonCTIMPHandbook.pdf>
- Jamieson, N., Maple, M., Ratnarajah, D., & Usher, K. (2020). Military moral injury: A concept analysis. *International Journal of Mental Health Nursing* Published Online First. <https://doi.org/10.1111/inm.12792>
- Jinkerson, J. D. (2016). Defining and assessing moral injury: A syndrome perspective. *Traumatology*, 22(2), 122–130. <https://doi.org/10.1037/trm0000069>
- Jordan, A. H., Eisen, E., Bolton, E., Nash, W. P., & Litz, B. T. (2017). Distinguishing war-related PTSD resulting from perpetration-and betrayal-based morally injurious events. *Psychological Trauma: Theory, Research, Practice, and Policy*, 9(6), 627–634. <https://doi.org/10.1037/tra0000249>
- Karatzias, T., Cloitre, M., Maercker, A., Kazlauskas, E., Shevlin, M., Hyland, P., Bisson, J. I., Roberts, N. P., & Brewin, C. R. (2017). PTSD and complex PTSD: ICD-11 updates on concept and measurement in the UK, USA, Germany and Lithuania. *European Journal of Psychotraumatology*, 8 (sup7). <https://doi.org/10.1080/20008198.2017.1418103>
- Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M., Hyland, P., Maercker, A., Ben-Ezra, M., Coventry, P., Mason-Roberts, S., Bradley, A., & Hutton, P. (2019). Psychological interventions for ICD-11 complex PTSD symptoms: Systematic review and meta-analysis. *Psychological Medicine*, 49(11), 1761–1775. <https://doi.org/10.1017/S0033291719000436>
- King, H. A., Perry, K. R., Ferguson, S., Hicken, B. L., Jackson, G. L., Lynch, C., Woolson, S. L., Wortmann, J. H., Nieuwsma, J. A., & Parry, K. J. (2023). Identifying potentially morally injurious events from the Veteran perspective: A qualitative descriptive study. *The Journal of Military, Veteran and Family Health*, 9(2), 27–39. https://doi.org/10.3138/JMVFH-2022-0049/ASSET/IMAGES/SMALL/JMVFH-2022-0049_F01.GIF
- Koenig, H. G., Youssef, N. A., & Pearce, M. (2019). Assessment of moral injury in veterans and active duty military personnel with PTSD: A review. *Frontiers in Psychiatry*, 10. <https://doi.org/10.3389/fpsy.2019.00443>
- Komarovskaya, I., Maguen, S., McCaslin, S. E., Metzler, T. J., Madan, A., Brown, A. D., Galatzer-Levy, I. R., Henn-Haase, C., & Marmar, C. R. (2011). The impact of killing and injuring others on mental health symptoms among police officers. *Journal of Psychiatric Research*, 45(10), 1332–1336. <https://doi.org/10.1016/j.jpsychires.2011.05.004>
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9. *Journal of General Internal Medicine*, 16(9), 606–613. <https://doi.org/10.1046/j.1525-1497.2001.016009606.x>
- Kubany, E. S., Haynes, S. N., Abueg, F. R., Manke, F. P., Brennan, J. M., & Stahura, C. (1996). Development and validation of the Trauma-Related Guilt Inventory (TRGI). *Psychological Assessment*, 8(4). <https://doi.org/10.1037//1040-3590.8.4.428>
- Litz, B. T., Contractor, A. A., Rhodes, C., Dondanville, K. A., Jordan, A. H., Resick, P. A., Foa, E. B., Young-McCaughan, S., Mintz, J., Yarvis, J. S., & Peterson, A. L. (2018). Distinct trauma types in military service members seeking treatment for posttraumatic stress disorder. *Journal of Traumatic Stress*, 31(2), 286–295. <https://doi.org/10.1002/jts.22276>
- Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, 29(8), 695–706. <https://doi.org/10.1016/j.cpr.2009.07.003>
- Maguen, S., & Burkman, K. (2013). Combat-related killing: Expanding evidence-based treatments for PTSD. *Cognitive and Behavioral Practice*, 20(4), 476–479. <https://doi.org/10.1016/j.cbpra.2013.05.003>
- Maguen, S., Burkman, K., Madden, E., Dinh, J., Bosch, J., Keyser, J., Schmitz, M., & Neylan, T. C. (2017). Impact of killing in war: A randomized, controlled pilot trial. *Journal of Clinical Psychology*, 73(9), 997–1012. <https://doi.org/10.1002/jclp.22471>
- Manea, L., Gilbody, S., & McMillan, D. (2012). Optimal cut-off score for diagnosing depression with the Patient Health Questionnaire (PHQ-9): A meta-analysis. *Canadian Medical Association Journal*, 184(3). <https://doi.org/10.1503/cmaj.110829>
- Molendijk, T., Verkoren, W., Drogendijk, A., Elands, M., Kramer, E.-H., Smit, A., & Verweij, D. (2022). Contextual dimensions of moral injury: An interdisciplinary review. *Military Psychology*, 34(6). <https://doi.org/10.1080/08995605.2022.2035643>
- Mulvale, G., Moll, S., Miatello, A., Robert, G., Larkin, M., Palmer, V. J., Powell, A., Gable, C., & Girling, M. (2019). Codesigning health and other public services with vulnerable and disadvantaged populations: Insights from an international collaboration. *Health Expectations*, 22(3), 284–297. <https://doi.org/10.1111/HEX.12864>
- Murphy, D., & Busuttill, W. (2019). Understanding the needs of veterans seeking support for mental health difficulties. *BMJ Military Health*. <https://doi.org/10.1136/jramc-2019-001204>
- Murphy, D., Karatzias, T., Busuttill, W., Greenberg, N., & Shevlin, M. (2021). ICD-11 posttraumatic stress disorder (PTSD) and complex PTSD (CPTSD) in treatment seeking veterans: Risk factors and comorbidity. *Social Psychiatry and Psychiatric Epidemiology*, 56(7). <https://doi.org/10.1007/s00127-021-02028-6>
- Nash, W. P., & Litz, B. T. (2013). Moral injury: A mechanism for war-related psychological trauma in military family members. *Clinical Child and Family Psychology Review*, 16(4), 365–375. <https://doi.org/10.1007/s10567-013-0146-y>
- National Institute for Clinical Excellence (NICE). (2018). *Post-traumatic stress disorder: NICE guideline*. NICE Guidance.
- Phelps, A. J., Adler, A. B., Belanger, S. A. H., Bennett, C., Cramm, H., Dell, L., Fikretoglu, D., Forbes, D., Heber, A., Hosseiny, F., Morganstein, J. C., Murphy, D., Nazarov, A., Pedlar, D., Richardson, J. D., Sadler, N., Williamson, V., Greenberg, N., & Jetly, R. (2022). Addressing moral injury in the military. *BMJ Military Health*, e002128. <https://doi.org/10.1136/BMJMILITARY-2022-002128>
- Purcell, N., Burkman, K., Keyser, J., Fucella, P., & Maguen, S. (2018). Healing from moral injury: A qualitative evaluation of the impact of killing treatment for combat veterans. *Journal of Aggression, Maltreatment & Trauma*, 27(6), 645–673. <https://doi.org/10.1080/10926771.2018.1463582>

- Resick, P. A., Monson, C. M., & Chard, K. M. (2016). *Cognitive processing therapy for PTSD: A comprehensive manual*. Guilford Publications.
- Richardson, N. M., Lamson, A. L., Smith, M., Eagan, S. M., Zvonkovic, A. M., & Jensen, J. (2020). Defining moral injury among military populations: A systematic review. *Journal of Traumatic Stress, 33*(4), 575–586. <https://doi.org/10.1002/jts.22553>
- Schorr, Y., Stein, N. R., Maguen, S., Barnes, J. B., Bosch, J., & Litz, B. T. (2018). Sources of moral injury among war veterans: A qualitative evaluation. *Journal of Clinical Psychology, 74*(12), 2203–2218. <https://doi.org/10.1002/JCLP.22660>
- Serfioti, D., Murphy, D., Greenberg, N., & Williamson, V. (2023, June 13). Professionals' perspectives on relevant approaches to psychological care in moral injury: A qualitative study. *Journal of Clinical Psychology*, Published online first. <https://doi.org/10.1002/JCLP.23556>
- Serfioti, D., Murphy, D., Greenberg, N., & Williamson, V. (2022, November 28). Effectiveness of treatments for symptoms of post-trauma related guilt, shame and anger in military and civilian populations: A systematic review. *BMJ Military Health*, Published online first. <https://doi.org/10.1136/MILITARY-2022-002155>
- Skivington, K., Matthews, L., Simpson, S. A., Craig, P., Baird, J., Blazeby, J. M., Boyd, K. A., Craig, N., French, D. P., McIntosh, E., Petticrew, M., Rycroft-Malone, J., White, M., & Moore, L. (2021). A new framework for developing and evaluating complex interventions: Update of Medical Research Council guidance. *BMJ, 374*. <https://doi.org/10.1136/BMJ.N2061>
- Steinmetz, S., & Gray, M. (2015). Treatment for distress associated with accurate appraisals of self-blame for moral transgressions. *Current Psychiatry Reviews, 11*(3), 207–219. <https://doi.org/10.2174/1573400511666150629105709>
- Sundin, J., Fear, N. T., Iversen, A., Rona, R. J., & Wessely, S. (2010). PTSD after deployment to Iraq: Conflicting rates, conflicting claims. *Psychological Medicine, 40*(3). <https://doi.org/10.1017/S0033291709990791>
- Sundin, J., Herrell, R. K., Hoge, C. W., Fear, N. T., Adler, A. B., Greenberg, N., Riviere, L. A., Thomas, J. L., Wessely, S., & Bliese, P. D. (2014). Mental health outcomes in US and UK military personnel returning from Iraq. *The British Journal of Psychiatry*, Published online first. Retrieved May 10, 2017, from <http://bjp.rcpsych.org/content/early/2014/01/02/bjp.bp.113.129569.short>.
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993, October). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility*. Paper presented at the Annual Meeting of International Society for Traumatic Stress Studies, San Antonio, TX, 1993.
- Williamson, C., Baumann, J., & Murphy, D. (2022). Exploring the health and well-being of a national sample of U.K. treatment-seeking veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, Published online first. <https://doi.org/10.1037/TRA0001356>
- Williamson, V., Greenberg, N., & Murphy, D. (2021). Predictors of moral injury in UK treatment seeking veterans. *Child Abuse & Neglect, 112*. <https://doi.org/10.1016/J.CHIBU.2020.104889>
- Williamson, V., Lamb, D., Hotopf, M., Raine, R., Stevelink, S., Wessely, S., Docherty, M., Madan, I., Murphy, D., & Greenberg, N. (2022). Moral injury and psychological wellbeing in UK healthcare staff. *medRxiv*. <https://doi.org/10.1101/2022.06.16.22276476>
- Williamson, V., Larkin, M., Reardon, T., Pearcey, S., Hill, C., Stallard, P., Spence, S. H., Breen, M., Macdonald, I., Ukoumunne, O., Ford, T., Violato, M., Sniehotta, F., Stainer, J., Gray, A., Brown, P., Sancho, M., & Creswell, C. (2021). Codesign and development of a primary school based pathway for child anxiety screening and intervention delivery: A protocol, mixed-methods feasibility study. *BMJ Open, 11*(4), e044852. <https://doi.org/10.1136/BMJOPEN-2020-044852>
- Williamson, V., Murphy, D., Aldridge, V., Bonson, A., Seforti, D., & Greenberg, N. (2022). Development of an intervention for moral injury-related mental health difficulties in UK military veterans: A feasibility pilot study protocol. *European Journal of Psychotraumatology*, ISSN: (Print) (Online) Published online first. <https://doi.org/10.1080/2008066.2022.2138059>
- Williamson, V., Murphy, D., Leightley, D., Ukoumunne, O., Greenberg, N. (under review). The design and validation of the Moral Injury Scale in the UK general population: MORIS.
- Williamson, V., Murphy, D., Phelps, A., Forbes, D., & Greenberg, N. (2021). Moral injury: The effect on mental health and implications for treatment. *The Lancet Psychiatry, 8*(6), 453–455. [https://doi.org/10.1016/S2215-0366\(21\)00113-9](https://doi.org/10.1016/S2215-0366(21)00113-9)
- Williamson, V., Murphy, D., Stevelink, S. A., Jones, E., Allen, S., & Greenberg, N. (2021, March 31). Family and occupational functioning following military trauma exposure and moral injury. *BMJ Military Health*, Published online first. <https://doi.org/10.1136/BMJMILITARY-2020-001770>
- Williamson, V., Murphy, D., Stevelink, S. A. M., Allen, S., Jones, E., & Greenberg, N. (2020). The impact of trauma exposure and moral injury on UK military veterans: A qualitative study. *European Journal of Psychotraumatology, 11*(1), 1704554. <https://doi.org/10.1080/20008198.2019.1704554>
- Williamson, V., Murphy, D., Stevelink, S. A. M., Allen, S., Jones, E., & Greenberg, N. (2021). Delivering treatment to morally injured UK military personnel and Veterans: The clinician experience. *Military Psychology, 33*(2), 115–123. <https://doi.org/10.1080/08995605.2021.1897495>
- Williamson, V., Stevelink, S. A. M., & Greenberg, N. (2018). Occupational moral injury and mental health: Systematic review and meta-analysis. *The British Journal of Psychiatry, 212*(6), 339–346. <https://doi.org/10.1192/BJP.2018.55>
- Wu, Y., Levis, B., Riehm, K. E., Saadat, N., Levis, A. W., Azar, M., Rice, D. B., Boruff, J., Cuijpers, P., Gilbody, S., Ioannidis, J. P. A., Kloda, L. A., McMillan, D., Patten, S. B., Shrier, I., Ziegelstein, R. C., Akena, D. H., Arroll, B., Ayalon, L., ... Thombs, B. D. (2020). Equivalency of the diagnostic accuracy of the PHQ-8 and PHQ-9: A systematic review and individual participant data meta-analysis. *Psychological Medicine, 50*. <https://doi.org/10.1017/S0033291719001314>