

Published by:

National Center for PTSD
VA Medical Center (116D)
215 North Main Street
White River Junction
Vermont 05009-0001 USA

(802) 296-5132
FAX (802) 296-5135
Email: ncptsd@va.gov

All issues of the PTSD Research
Quarterly are available online at:
www.ptsd.va.gov

Editorial Members:

Editorial Director
Paul Holtzheimer, MD

Bibliographic Editor
David Kruidenier, MLS

Managing Editor
Heather Smith, BA Ed

National Center Divisions:

Executive
White River Jct VT

Behavioral Science
Boston MA

Dissemination and Training
Menlo Park CA

Clinical Neurosciences
West Haven CT

Evaluation
West Haven CT

Women's Health Sciences
Boston MA

Examining Functioning and Well-Being Outcomes in PTSD Treatment Outcome Research

In recent years, there has been a growing call for the mental health field to expand its focus beyond indicators of disease to consider the broader functioning and well-being of individuals who experience mental health conditions. For example, scholars have argued that adequate understanding of mental health requires consideration of both negative and positive mental health concepts (e.g., mental illness *and* emotional well-being) ([Keyes, 2007](#); [Trompetter et al., 2017](#)) and that holistic assessments of well-being are necessary to better understand the implications that mental health conditions and their treatment have for individuals' broader lives ([Rottenberg & Kashdan, 2022](#); [Vogt et al., 2022](#)). Indeed, research has revealed only modest associations among symptom severity assessments and functioning and well-being measurements ([Bech et al., 2003](#); [McKnight et al., 2016](#)), highlighting that these types of measures provide novel information not captured in symptom-based measurements.

In the current article, we draw from emerging literature on the inclusion of functioning and well-being measures in PTSD treatment outcome research to describe two ways that these types of measures can enhance knowledge of PTSD treatment and move the field forward. Specifically, we review literature on the impact of PTSD treatment on functioning and well-being outcomes and how these factors influence PTSD treatment engagement and effectiveness. We conclude by describing directions

Dawne Vogt, PhD

Women's Health Sciences Division, National Center for PTSD
VA Boston Healthcare System
Department of Psychiatry, Boston University Chobanian &
Avedisian School of Medicine

Shaina A. Kumar, MA

VA Boston Healthcare System
University of Nebraska-Lincoln

Lewina O. Lee, PhD

VA Boston Healthcare System
Department of Psychiatry, Boston University Chobanian &
Avedisian School of Medicine
Behavioral Sciences Division, National Center for PTSD

for future work on the relevance of functioning and well-being for PTSD treatment outcome research.

Defining Functioning and Well-Being

For this article, we discuss the relevance of both functional impairment measures as well as measures of broader well-being for PTSD treatment outcome research. We draw this distinction due to substantial differences in the focus of these measures. Whereas functional impairment measures typically limit their attention to the negative end of the functioning continuum (e.g., from very to not at all impaired), measurements of well-being address the extent to which individuals are doing well, often though not always including assessments that capture the full range of human experience (e.g., from poor to excellent). Based on theory and prior research, we define high well-being as experiencing positive emotions and cognitions regarding overall life circumstances (e.g., happiness, overall satisfaction, sense of purpose), along with good outcomes with respect to domain-specific life circumstances (e.g., health, social, financial, vocational well-being). In addition to its focus on the positive end of the functioning continuum, a core feature of this definition is its inclusion of well-being concepts relevant to both overall life circumstances and domain-specific circumstances. This is a critical aspect of this definition, as many well-being measurements focus on overall well-being (e.g., whether individuals generally experience positive emotions or have

Continued on page 2



U.S. Department
of Veterans Affairs

an overall sense of purpose), giving less attention to how well-being varies across life domains (e.g., well-being measurements in vocational, financial, and social domains). Yet, when laypeople are asked what well-being means to them, they describe both overall and domain-specific aspects of their life as important considerations in evaluating their well-being (e.g., [Carlquist et al., 2017](#)). Finally, the focus on outcomes with regard to multiple life domains allows for the consideration of both good living conditions that are often the subject of research on “social determinants of health,” such as employment, housing, and social integration (vs. social isolation), as well as subjective perceptions of domain-specific circumstances (e.g., evaluations of functioning and satisfaction in social relationships), consistent with the perspective that a comprehensive understanding of well-being requires the consideration of both objective and subjective experiences ([Gladis et al., 1999](#); [Vogt et al., 2019](#)).

Impact of PTSD Treatment on Functioning and Well-Being

Largely using the nomenclature of “quality of life” a substantial body of research has documented the impact of PTSD on both functioning and well-being outcomes, much of it in the military Veteran literature (e.g., [Rodriguez et al., 2012](#); [Schnurr et al., 2009](#); [Vogt et al., 2017](#)). Many of these studies have focused on PTSD’s implications for functional impairment (e.g., [Rodriguez et al., 2012](#)), with a smaller body of research examining the consequences of PTSD for well-being outcomes, including indicators of good living conditions as well as positive perceptions of functioning and satisfaction across multiple life domains (e.g., [Blakey et al., 2022](#)). Overall, these findings have revealed negative implications of PTSD for multiple aspects of functioning and well-being, with some evidence that PTSD may have an even more detrimental effect on these types of outcomes than other mental health conditions such as generalized anxiety disorder, panic disorder, and obsessive-compulsive disorder ([Olatunji et al., 2007](#)).

This literature highlights the importance of evaluating not only whether PTSD treatment reduces symptom severity, but also whether it is able to return patients to their premorbid levels of functioning and well-being. Yet, for the most part, PTSD treatment studies have historically included only cursory measurements of these types of outcomes and given them less attention in evaluations of treatment effectiveness than symptom reduction. This practice has been questioned in recent years with scholars arguing that challenges regarding broader functioning and well-being are often what drive many patients to seek treatment therefore warranting more consideration in evaluating treatment outcomes. Indeed, a recent article on this topic noted that improvements in these outcomes may be even more clinically meaningful to patients than symptom reduction, as symptom concerns are often raised in the context of their impact on broader functional concerns, such as their impact on an individual’s ability to “get through a shift at work,” their effect on intimate relationships, etc. ([Benfer & Litz, 2023](#)). Likewise, in a commentary on the need for a broader approach to treating PTSD, [Kearney and Simpson \(2015\)](#) also called for increased attention to these types of outcomes, noting their critical importance to patients.

Despite limited examination of the impact of PTSD treatment on these types of outcomes, initial evidence indicates that PTSD treatment, including both Cognitive Processing Therapy (CPT) and Prolonged Exposure Therapy (PE), leads to improvements in these

outcomes, although these effects tend to be more modest than for symptom reduction ([Benfer & Litz, 2023](#); [Bonfils et al., 2022](#)). Research also indicates that these improvements often follow symptom declines ([Schnurr & Lunney, 2016](#)), and there is some evidence that meaningful improvements in functioning may only emerge when individuals are treated to the point that they no longer meet diagnostic criteria for PTSD ([Reich et al., 2019](#); [Schnurr & Lunney, 2016](#)). Consistent with this perspective, a recent study that examined changes in cognitive, affective, and social well-being during PTSD treatment revealed that most well-being changes occurred in the second half of treatment, with moderate to large improvements overall and greater improvement in affective well-being (i.e., positive emotions) as compared to cognitive well-being (i.e., sense of purpose; [Gallagher et al., 2020](#)).

Impact of Functioning and Well-Being on Treatment Engagement and Effectiveness

Even though functional impairment is a diagnostic criterion for PTSD, some individuals may experience substantially poorer functioning and well-being than others, which may have implications for both PTSD treatment engagement and effectiveness. Yet, few studies have considered how pre-treatment levels of functioning and well-being influence these outcomes. Although focused on socio-material living conditions and other traditionally studied “social determinants of health” rather than well-being more broadly, a recent commentary highlights the importance of attending to individuals’ broader life contexts in evaluating treatment outcomes ([Holder et al., 2022](#)). As discussed in this article, experiencing PTSD in the context of additional stressors may decrease the ability to heal and exacerbate symptoms. Moreover, among those who are experiencing economic instability or other material hardships, meeting basic needs may take precedence over accessing PTSD care, which may negatively impact treatment engagement. The potential relevance of pre-treatment well-being (in this case, positive emotions) is also highlighted in the “broaden-and-build” theory, which posits that positive emotions may generate an upward spiral toward optimal functioning and inspire resilience, encouraging personal growth, reflectiveness and improved physical health ([Fredrickson, 2001](#)).

Two studies provide initial evidence for the role that individuals’ well-being may play in treatment effectiveness. The first found that military Veterans with PTSD were more likely to initiate treatment when they reported having more social support, a key indicator of social well-being ([Fivecoat et al., 2023](#)). The second found that individuals benefited more from PTSD treatment (in this case, care-as-usual) when they reported higher levels of what they termed emotional (e.g., happiness, life satisfaction, positive affect), psychological (e.g., purpose in life, self-acceptance, personal growth), and social well-being (e.g., social integration, social contribution) at baseline ([Radstaak et al., 2022](#)). In interpreting these results, the authors posited that higher emotional well-being may foster greater receptivity to positive cognitive reframing, whereas higher meaning in life may make traumatic events more interpretable and greater social well-being may facilitate better recovery due to increased access to social support.

Key Directions for Future Research

This review suggests a number of directions for future research, including expanding the assessment of functioning and well-being

outcomes in PTSD treatment research and giving these types of measures more attention in the evaluation of PTSD treatment effectiveness. All else being equal, a treatment that has a greater impact on these outcomes should be preferred to one that produces only modest improvements in them. Another area for further inquiry concerns the evaluation of how individuals' pre-existing functioning and well-being influences PTSD treatment engagement and effectiveness. An individual who begins with higher cognitive and affective well-being, or who is experiencing fewer challenges in other aspects of their life, may be more likely to complete and benefit from treatment than one who begins with lower well-being.

Given the predominant focus on measuring functional impairment rather than well-being more broadly in this literature, it will also be important to increase the use of assessments that address the full spectrum of human experience, from low to high well-being. This is particularly critical, as change along the positive end of the functional continuum (e.g., from moderate to higher well-being) are not captured in measurements of functioning impairment and, consequently, some positive impacts of PTSD treatment may be missed when using these measures. Likewise, it has been argued that the use of measures that focus on activities of daily living may result in ceiling effects for higher-functioning patient populations (McKnight & Kashdan, 2009), highlighting the need to extend functioning measurements beyond a predominant focus on activities of daily living (e.g., dressing and feeding oneself, walking up several flights of stairs) to evaluate other relevant activities and pursuits, such as whether individuals are able to engage in those roles and activities that matter most to them. Furthermore, future research would benefit from greater use of domain-specific measurements (e.g., measures of both work and social satisfaction), as there is evidence that treatment effects may vary across different domains of functioning and well-being (Hofmann et al., 2014).

Longitudinal studies with longer-term follow-ups are particularly needed on this topic, given that improvements in functioning and well-being may take longer to emerge than symptom improvements (McKnight & Kashdan, 2009; Rottenberg & Kashdan, 2022), and there may be differences in the extent to which treatment gains on these outcomes are sustained over time. Likewise, there is some evidence that there may be bidirectional relationships between these factors (Glanton et al., 2022; Lord et al., 2020), which supports the value of examining how PTSD symptom improvements relate to changes in functioning and well-being throughout the course of treatment. Finally, it will be important to evaluate whether the role of functioning and well-being in PTSD treatment outcome research varies for key patient populations, including women as compared to men and members of minoritized racial and ethnic subgroups, as examples.

These findings also have implications for the development and refinement of PTSD treatments. In particular, the finding that improvements in functioning and well-being outcomes tend to be relatively modest following PTSD treatment suggests the need for greater consideration for how PTSD treatment can be adapted or supplemented to better enhance individuals' broader functioning and well-being, as noted in a recent commentary by Kearney and Simpson (2015). Some existing treatments already embed a more explicit focus on functioning in the treatment process, most commonly social functioning. For example, both Cognitive-

Behavioral Conjoint Therapy (CBCT; Monson & Freedman, 2012) and Skills Training in Affective and Interpersonal Regulation (STAIR; Cloitre et al., 2002) address challenges with regard to social functioning as part of treatment, with evidence that both have the potential to decrease trauma symptoms and improve relationship functioning. Likewise, research has begun to evaluate the importance of focusing on broader functional challenges as part of the case conceptualization process (Galovski et al., 2020), an approach that holds promise for increasing both PTSD treatment engagement and effectiveness. Indeed, it has been suggested that treatments that focus on building positive functioning and well-being may be more engaging, less stigmatizing, and better aligned with goal setting and achievement (Cloitre et al., 2016). Subsequently, individuals might be better equipped to engage in trauma-focused work, leading to increased retention and greater PTSD symptom reduction (Cloitre et al., 2016).

Conclusions

Attention to the broader functioning and well-being of individuals who participate in PTSD treatment has been relatively sparse to date. Along with their potential to protect individuals from developing PTSD in the first place, attending to these factors in PTSD treatment research can enhance knowledge of which treatments are most effective in improving patients' broader lives and provide insight into the conditions under which treatments are more or less effective. In turn, this knowledge can facilitate the use of treatments that have an even greater positive impact on the lives of those who seek PTSD treatment.

FEATURED ARTICLES

Bech, P., Olsen, L. R., Kjoller, M., & Rasmussen, N. K. (2006). **Measuring well-being rather than the absence of distress symptoms: A comparison of the SF-36 Mental Health Subscale and the WHO-Five Well-Being Scale.** *International Journal of Methods in Psychiatric Research*, 12(2), 85–91. doi:10.1002/mpr.145

The health status questionnaire Short-Form 36 (SF-36) includes subscales measuring both physical health and mental health. Psychometrically, the mental health subscale contains a mixture of mental symptoms and psychological well-being items, among other things, to prevent a ceiling effect when used in general population studies. Three of the mental health well-being items are also included in the WHO-Five well-being scale. In a Danish general population study, the mental health subscale was compared psychometrically with the WHO-Five in order to evaluate the ceiling effect. Tests for unidimensionality were used in the psychometric analyses, and the sensitivity of the scales in differentiating between changes in self-reported health over the past year has been tested. The results of the study on 9,542 respondents showed that, although the WHO-Five and the mental health subscale were found to be unidimensional, the WHO-Five had a significantly lower ceiling effect than the mental health subscale. The analysis identified the three depression symptoms in the mental health subscale as responsible for the ceiling effect. The WHO-Five was also found to be significantly superior to the mental health subscale in terms of its sensitivity in differentiating between those persons whose health had deteriorated over the past year and those whose health had not. In conclusion, the WHO-Five, which measures psychological well-being, reflects aspects other than just the absence of depressive symptoms.

Benfer, N., Litz, B.T. (2023). **Assessing and addressing functioning and quality of life in PTSD.** *Current Treatment Options in Psychiatry* 10, 1–20. doi:10.1007/s40501-023-00284-8

Purpose of review: Arguably, the most important goal of psychotherapy is to improve patients' functioning and quality of life (QoL). Because the field of post-traumatic stress disorder (PTSD) has been driven by the disease model, outcomes are solely indexed by symptom change. We review the barriers to assessing functioning and QoL in PTSD and examine the available evidence that evidence-based treatments for PTSD that focus on symptom change address functioning and QoL. *Recent findings:* Assessments of functioning and QoL are limited because current methods are nomothetic and fail to capture the breadth and depth of functioning (while still being feasible to implement in routine practice). Notwithstanding this limitation, cognitive processing and prolonged exposure therapies are not superior to other treatments in improving functioning and QoL. *Summary:* Clinicians and clinical researchers should attend to functioning and QoL to plan treatment and track change. Ideally, assessments of functioning and QoL require an idiographic approach that identifies unique domains of functional problems. In contrast to the disease model, a recovery-oriented framework is better suited to advance knowledge about treatment-valid assessment approaches in PTSD.

Blakey, S. M., Dillon, K. H., Wagner, H. R., Simpson, T. L., Beckham, J. C., Calhoun, P. S., & Elbogen, E. B. (2022). **Psychosocial well-being among veterans with posttraumatic stress disorder and substance use disorder.** *Psychological Trauma: Theory, Research, Practice, and Policy*, 14(3), 421–430. doi:10.1037/tra0001018

Objective: Concurrent posttraumatic stress disorder and substance use disorder (PTSD/SUD) in U.S. military Veterans represents an urgent public health issue associated with significant clinical challenges. Although previous research has shown that Veterans with PTSD/SUD endorse more psychosocial risk factors and fewer protective factors than Veterans with neither or only one of these disorders, no study has applied a comprehensive framework to characterize the vocational, financial, and social well-being of Veterans with PTSD/SUD. Furthermore, it is not fully known how well-being among Veterans with PTSD/SUD compares to that of Veterans with posttraumatic stress disorder (PTSD) only, substance use disorder (SUD) only, or neither disorder. *Method:* This cross-sectional observational study analyzed data from the National Post-Deployment Adjustment Survey, which recruited a random national sample of U.S. Veterans who served on/after September 11, 2001. Participants (weighted $N = 1,102$) self-reported sociodemographic, clinical, and military background information in addition to aspects of their vocational, financial, and social well-being. *Results:* Veterans with PTSD/SUD were particularly likely to report lifetime experiences of homelessness, violent behavior, suicidal ideation, and suicide attempts. Veterans with PTSD/SUD reported worse social well-being than the PTSD-only, SUD-only, and neither-disorder groups. They also reported worse vocational and financial well-being than Veterans with SUD only or with neither disorder but did not significantly differ from the PTSD-only group on vocational or financial well-being. *Conclusions:* The findings underscore the importance of assessing multiple aspects of well-being in Veterans with PTSD and/or SUD. The findings also point to

promising treatment targets to improve psychosocial functioning and overall quality of life among Veterans with PTSD and/or SUD.

Bonfils, K. A., Tennity, C. L., Congedo, B. A., Dolowich, B. A., Hammer, L. A., Haas, G. L. (2022). **Functional outcomes from psychotherapy for people with posttraumatic stress disorder: A meta-analysis.** *Journal of Anxiety Disorders*, 89, 102576. doi:10.1016/j.janxdis.2022.102576 People with posttraumatic stress disorder (PTSD) experience a wide array of symptoms, often accompanied by significant functional and quality of life impairments. Evidence-based psychotherapies are effective for alleviating symptoms in this group, but functional outcomes following psychotherapy are understudied. This study aimed to synthesize existing work on functional outcomes of psychotherapy to conduct a meta-analytic investigation examining whether people with PTSD experience significant improvements in functioning and quality of life following a course of psychotherapy. A literature search was conducted for studies reporting results of randomized clinical trials of psychotherapies for people diagnosed with PTSD that included a functional or quality of life outcome measured at pre- and post-intervention. Both between-groups and within-groups analyses were conducted using a random effects model. Fifty-six independent samples were included. Results suggest that, on average, people with PTSD experience significant, moderate improvement in functional outcomes after a course of psychotherapy. Taken together, this meta-analysis represents a substantial advance in our understanding of functional outcomes of psychotherapy for people with PTSD. Findings suggest that psychotherapy is one vehicle through which functional outcomes may be improved for this group, though notably to a lesser degree than symptom improvement.

Fivecoat, H. C., Lookatch, S. J., Mavandadi, S., McKay, J. R., & Sayers, S. L. (2023). **Social factors predict treatment engagement in veterans with PTSD or SUD.** *The Journal of Behavioral Health Services & Research*, 50(3), 286–300. doi:10.1007/s11414-022-09823-2 Veterans with PTSD and SUDs often fail to initiate, or prematurely discontinue, mental health treatment in Veteran Affairs Medical Centers (VAMC). While much is known about clinical characteristics and demographic factors impacting treatment engagement in this population, less is known about the role of social factors. This retrospective study examines primary care-based screening assessment and specialty mental healthcare appointment data in a VAMC, to test whether social factors predict treatment initiation and appointment attendance. Findings reveal Veterans were more likely to initiate treatment when (a) those with SUDs ($n = 235$) reported more frequent negative exchanges with others and (b) those with PTSD ($n = 2107$) reported more perceived support or being partnered. Those with PTSD who were partnered had higher appointment attendance rates. Findings suggest social factors are relevant to treatment initiation among Veterans with PTSD and SUDs and that close others may be helpful in facilitating referrals.

Gallagher, M. W., Phillips, C. A., D'Souza, J., Richardson, A., Long, L. J., Boswell, J. F., Farchione, T. J., & Barlow, D. H. (2020). **Trajectories of change in well-being during cognitive behavioral therapies for anxiety disorders: Quantifying the impact and covariation with improvements in anxiety.** *Psychotherapy*, 57(3), 379–390. doi:10.1037/pst0000283 Cognitive behavior therapy (CBT)

has found to be very effective in reducing many forms of mental illness, but much less is known about whether CBT also promotes mental health or well-being. The goals of the present study were to 1) quantify the magnitude and timing of changes in overall well-being and specific facets of well-being during different CBT treatments for anxiety disorders, 2) determine whether these effects vary across transdiagnostic and disorder-specific CBT, and 3) examine how changes in well-being during treatment relate to changes in anxiety. 223 adults (55.6% female, $M_{age}=31.1$ yrs) were randomized to one of five CBT protocols for anxiety disorders at an outpatient clinic. Analyses included ESs effect sizes and latent growth curve modeling. Moderate-to-large increases in overall well-being and the three components of subjective, psychological, and social well-being were observed, mainly during the second half of CBT, and these increases were maintained at a 6-month follow-up. The magnitude of effects was comparable for transdiagnostic and disorder-specific CBT protocols, and greater than in the waitlist. Parallel process latent growth curve models indicated that trajectories of change in well-being across treatment were strongly correlated with trajectories of change in clinician-rated and self-reported anxiety. Together, these findings suggest that different CBT protocols for anxiety consistently produce robust and lasting changes in well-being and these changes are strongly linked to changes in anxiety during treatment.

Holder, N., Mehlman, H., Delgado, A.K. & Maguen, S. (2022). **The importance of context: Using social determinants of health to improve research and treatment of posttraumatic stress disorder.** *Current Treatment Options in Psychiatry*, 9, 363–375. doi:10.1007/s40501-022-00278-y *Purpose of Review:* Due to the unique characteristics of posttraumatic stress disorder (PTSD), considering the contextual factors that influence the development, maintenance, and treatment of PTSD is particularly important. Social determinants of health (SDoH) provide a transdiagnostic, comprehensive, and actionable approach to studying and accounting for contextual factors that are relevant for PTSD. While some SDoH factors have been studied previously as standalone characteristics, there are numerous gaps in the current literature regarding the associations between SDoH and PTSD. *Recent Finding:* This manuscript highlights existing research on the associations between SDoH and PTSD, including sociopolitical context, individual structural determinants, and intermediary determinants. The preponderance of existing research has focused on individual structural determinants (e.g., race/ethnicity, gender, education); however, a shift toward understanding intermediary determinants (e.g., living conditions, material circumstances, cultural factors, psychosocial factors) may provide stronger targets for PTSD prevention and intervention. *Summary:* The manuscript concludes with considerations of how understanding the associations between SDoH and PTSD, with an emphasis on intermediary determinants, has the potential to improve PTSD research and clinical care.

Keyes C. L. M. (2007). **Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health.** *The American Psychologist*, 62(2), 95–108. doi:10.1037/0003-066X.62.2.95 This article summarizes the conception and diagnosis of the mental health continuum, the findings supporting the two continua model of mental health and illness, and the benefits of flourishing to individuals and society.

Completely mentally healthy adults—individuals free of a 12-month mental disorder and flourishing—reported the fewest missed days of work, the fewest half-day or greater work cutbacks, the healthiest psychosocial functioning (i.e., low helplessness, clear goals in life, high resilience, and high intimacy), the lowest risk of cardiovascular disease, the lowest number of chronic physical diseases with age, the fewest health limitations of activities of daily living, and lower health care utilization. However, the prevalence of flourishing is barely 20% in the adult population, indicating the need for a national program on mental health promotion to complement ongoing efforts to prevent and treat mental illness. Findings reveal a Black advantage in mental health as flourishing and no gender disparity in flourishing among Whites.

Lord, K. A., Suvak, M. K., Holmes, S., Shields, N., Lane, J. E. M., Sijercic, I., Wagner, A. C., Stirman, S. W., & Monson, C. M. (2020). **Bidirectional relationships between posttraumatic stress disorder and social functioning during cognitive processing therapy.** *Behavior Therapy*, 51(3), 447–460. doi:10.1016/j.beth.2019.08.002 This study investigated temporal relationships between posttraumatic stress symptoms and two indicators of social functioning during cognitive processing therapy. Participants were 176 patients (51.5% female, $M_{age} = 39.46$ [SD = 11.51], 89.1% White, 42.6% active-duty military/Veteran) who participated in at least two assessment time points during a trial of cognitive processing therapy. Posttraumatic stress disorder (PTSD) symptoms (PTSD Checklist for DSM-IV) and interpersonal relationship and social role functioning problems (Outcome Questionnaire–45) were assessed prior to each of 12 sessions. Multivariate multilevel lagged analyses indicated that interpersonal relationship problems predicted subsequent PTSD symptoms ($b = .22$, SE = 0.09, $cr = 2.53$, $p = .01$, $pr = .46$) and vice versa ($b = .05$, SE = 0.02, $cr = 2.11$, $p = .04$, $pr = .16$); and social role functioning problems predicted subsequent PTSD symptoms ($b = .21$, SE = 0.10, $cr = 2.18$, $p = .03$, $pr = .16$) and vice versa ($b = .06$, SE = 0.02, $cr = 3.08$, $p = .001$, $pr = .23$). Military status moderated the cross-lag from social role functioning problems to PTSD symptoms ($b = -.35$, $t = -2.00$, $p = .045$, $pr = .16$). Results suggest a robust association between PTSD symptoms and social functioning during cognitive processing therapy with a reciprocal relationship between PTSD symptoms and social functioning over time. Additionally, higher social role functioning problems for patients with military status indicate smaller reductions in PTSD symptoms from session to session.

McKnight, P. E., & Kashdan, T. B. (2009). **The importance of functional impairment to mental health outcomes: A case for reassessing our goals in depression treatment research.** *Clinical Psychology Review*, 29(3), 243–259. doi:10.1016/j.cpr.2009.01.005 Outcomes in depression treatment research include both changes in symptom severity and functional impairment. Symptom measures tend to be the standard outcome, but we argue that there are benefits to considering functional outcomes. An exhaustive literature review shows that the relationship between symptoms and functioning remains unexpectedly weak and often bidirectional. Changes in functioning often lag symptom changes. As a result, functional outcomes might offer depression researchers more critical feedback and better guidance when studying depression

treatment outcomes. The paper presents a case for the necessity of both functional and symptom outcomes in depression treatment research by addressing three aims—1) review the research relating symptoms and functioning, 2) provide a rationale for measuring both outcomes, and 3) discuss potential artifacts in measuring functional outcomes. The three aims are supported by an empirical review of the treatment outcome and epidemiological literatures.

Radstaak, M., Hüning, L., Lamers, S., Bohlmeijer, E. T. (2022). **Examining well-being in posttraumatic stress disorder treatment: An explorative study.** *Journal of Traumatic Stress, 35*(3), 914–925. doi:10.1002/jts.22798 Although the importance of well-being in mental health is widely acknowledged, well-being as a predictor of and outcome in the treatment for posttraumatic stress disorder (PTSD) has received little attention. This naturalistic study aimed to investigate well-being in the context of care-as-usual treatment for PTSD. Patients with PTSD attending a community mental health center ($N = 318$) completed measures of well-being and PTSD symptoms before and after symptom-focused treatment. Following treatment, well-being increased among patients with PTSD, with emotional, $d = -0.25$, and psychological well-being, $d = -0.24$, showing the largest improvements relative to social well-being, $d = -0.15$. Although levels of well-being improved overall within the sample, participant scores on measures of well-being remained low compared with the general population. Well-being predicted treatment efficiency such that participants with more severe PTSD symptoms benefitted more from care-as-usual treatment when they reported relatively high levels of well-being at the start of treatment. The findings suggest a benefit to including well-being as a pretreatment and outcome variable when evaluating PTSD treatments.

Rottenberg, J., & Kashdan, T. B. (2022). **Well-Being after psychopathology: A transformational research agenda.** *Current Directions in Psychological Science, 31*(3), 280–287. doi:10.1177/09637214221093616 If one struggles with depression, anxiety, or suicidal impulses, what is the best outcome that one can hope for? Can psychopathology be a bridge to a better place where people operate with autonomy and self-mastery, enjoy healthy relationships, experience frequent positive emotions, and view life as meaningful and purposeful? Studies of national samples have revealed that a substantial number of people with depression, panic disorder, and suicidal impulses go on to achieve high levels of psychological well-being. We consider the practical and theoretical implications of these findings and call for a transformational mental-health agenda that focuses on good outcomes.

Schnurr, P. P., & Lunney, C. A. (2016). **Symptom benchmarks of improved quality of life in PTSD.** *Depression and Anxiety, 33*(3), 247–255. doi:10.1002/da.22477 *Background:* Although research has shown that PTSD symptom change relates to improved quality of life, the question of how much improvement in PTSD symptoms is necessary to result in meaningful improvements in quality of life remains unanswered. We used data from a randomized clinical trial of psychotherapy for PTSD in female military Veterans and active duty personnel to examine the correspondence between benchmarks of improvement in PTSD symptoms and changes in quality of life. *Methods:* Participants were 235 female Veterans and Army soldiers who were randomized to 10 weekly sessions of Prolonged

Exposure or Present-Centered Therapy. We operationalized PTSD symptom change in terms of four progressively stringent mutually exclusive definitions—No Response, Response, Loss of Diagnosis, and Remission—successively comparing each category to the prior one: No Response versus Response, Response versus Loss of Diagnosis, and Loss of Diagnosis versus Remission. Outcomes were clinically meaningful improvements and good endpoints in domains of clinician-rated and self-reported quality of life. *Results:* Response was associated with improvement on almost all measures, but with only one good endpoint. Loss of Diagnosis was associated with improvement on all measures except self-rated social functioning and with achieving a good endpoint on all measures. Remission was associated with improvement in clinician-rated social impairment and a good endpoint in clinician-rated occupational impairment. *Conclusions:* For most domains of quality of life, treating a patient until the patient no longer meets diagnostic criteria would be optimal. For some domains, further improvements may result by helping a patient achieve remission.

Schnurr, P. P., Lunney, C. A., Bovin, M. J., & Marx, B. P. (2009). **Posttraumatic stress disorder and quality of life: Extension of findings to veterans of the wars in Iraq and Afghanistan.** *Clinical Psychology Review, 29*(8), 727–735. doi:10.1016/j.cpr.2009.08.006 The wars in Iraq and Afghanistan—Operation Iraqi Freedom and Operation Enduring Freedom, or OEF/OIF—have created unique conditions for promoting the development of psychological difficulties such as posttraumatic stress disorder (PTSD). PTSD is an important outcome because it can affect quality of life, impairing psychosocial and occupational functioning and overall well-being. The literature on PTSD and quality of life in OEF/OIF Veterans is at an early stage, but the consistency of the evidence is striking. Our review indicates that the findings on PTSD and quality of life in OEF/OIF Veterans are comparable to findings obtained from other war cohorts and from non-Veterans as well. Even though the duration of PTSD in OEF/OIF Veterans is much shorter than in Vietnam Veterans, for example, those with PTSD in both cohorts are likely to experience poorer functioning and lower objective living conditions and satisfaction. The review ends with discussion of the implications of the evidence for research and clinical practice.

Trompetter, H. R., Lamers, S. M. A., Westerhof, G. J., Fledderus, M., & Bohlmeijer, E. T. (2017). **Both positive mental health and psychopathology should be monitored in psychotherapy: Confirmation for the dual-factor model in acceptance and commitment therapy.** *Behaviour Research and Therapy, 91*, 58–63. doi:10.1016/j.brat.2017.01.008 The dual-factor model of mental health suggests that enhancing positive mental health and alleviating psychopathology do not automatically go hand-in-hand. This study investigates the relationship between the effectiveness on depression/anxiety symptoms and positive mental health of Acceptance and Commitment Therapy (ACT). It draws on RCT data ($n = 250$) of a self-help ACT. Patients' depression/anxiety symptoms and positive mental health were completed at baseline, at post-intervention after nine weeks, and at follow-up after five months. Percentage of unique variance of depression/anxiety symptoms explained by positive mental health (and vice versa), and the degree of classificatory agreement between improvements in positive mental health and depression/anxiety, were examined

using regression analysis and Reliable Change Index (RCI). Positive mental health, i.e., baseline and change, explained 15% and 12% of the variance in follow-up depression and anxiety symptoms, beyond the 7% and 9% that was explained by baseline levels of depression and anxiety. Depression and anxiety symptoms, i.e., baseline and change, explained 10% and 9% of the variance in follow-up positive mental health, on top of the 35% that was explained by baseline levels of positive mental health. Cross-classification of the Reliable Changes showed that 64% of the participants that improved during the ACT-intervention, improved on either depression symptoms or positive mental health, and 72% of the participants improved on either anxiety symptoms or positive mental health. The findings support the dual-factor model and suggest that it is important to systematically implement measures of both psychopathology and positive mental health in mental health care and therapy evaluation.

Vogt, D., Borowski, S., Maguen, S., Blossnich J.R., Hoffmire, C.A., Bernhard, P.A., Iverson, K.M. & Schneiderman, A. (2022). **Strengths and vulnerabilities: Comparing post-9/11 U.S. veterans' and non-veterans' perceptions of health and broader well-being.** *Social Science and Medicine - Population Health*, 19, 101201. doi:10.1016/j.ssmph.2022.101201 *Background:* Prior research has examined how the post-military health and well-being of both the larger Veteran population and earlier Veteran cohorts differs from non-Veterans. However, no study has yet to provide a holistic examination of how the health, vocational, financial, and social well-being of the newest generation of post-9/11 U.S. military Veterans compares with their non-Veteran peers. This is a significant oversight, as accurate knowledge of the strengths and vulnerabilities of post-9/11 Veterans is required to ensure that the needs of this population are adequately addressed, as well as to counter inaccurate Veteran stereotypes. *Methods:* Post-9/11 U.S. Veterans' ($N = 15,160$) and non-Veterans' ($N = 4,533$) reported on their health and broader well-being as part of a confidential web-based survey in 2018. Participants were drawn from probability-based sampling frames, and sex-stratified weighted logistic regressions were conducted to examine differences in Veterans' and non-Veterans' reports of health, vocational, financial, and social outcomes. *Results:* Although both men and women post-9/11 Veterans endorsed poorer health status than non-Veterans, they reported greater engagement in a number of positive health behaviors (healthy eating and exercise) and were more likely to indicate having access to health care. Veterans also endorsed greater social well-being than non-Veterans on several outcomes, whereas few differences were observed in vocational and financial well-being. *Conclusion:* Despite their greater vulnerability to experiencing health conditions, the newest generation of post-9/11 U.S. Veterans report experiencing similar or better outcomes than non-Veterans in many aspects of their lives. Findings underscore the value of examining a wider range of health and well-being outcomes in Veteran research and highlight a number of important directions for intervention, public health education, policy, and research related to the reintegration of military Veterans within broader civilian society.

Vogt, D., Smith, B. N., Fox, A. B., Amoroso, T., Taverna, E., & Schnurr, P. P. (2017). **Consequences of PTSD for the work and family quality of life of female and male U.S. Afghanistan and Iraq War veterans.** *Social Psychiatry and Psychiatric Epidemiology*, 52(3), 341–352. doi:10.1007/s00127-016-1321-5 *Purpose:*

Although it is well established that combat-related PTSD can lead to reduced quality of life, less is known about the relative effect of PTSD on different aspects of former service members' post-military readjustment. Moreover, research on female Veterans' reintegration experiences is limited. This study aimed to document the work and family quality of life of post-9/11 male and female Veterans and evaluate the gender-specific impact of PTSD on Veterans' work and family outcomes. *Methods:* A national sample of 524 post-9/11 Veterans completed mailed surveys as part of a longitudinal study. Descriptive and regression-based analyses were gender-stratified and weighted to enhance representativeness to the larger population. *Results:* With a few notable exceptions, the majority of post-9/11 U.S. Veterans reported high work and family quality of life. PTSD was not associated with either employment or relationship status; however, it did predict poorer work and family functioning and satisfaction for both men and women, with the most consistent negative effects on intimate relationships. Several gender differences were found, primarily with respect to work experiences. *Conclusions:* Although most post-9/11 Veterans appear to be doing well in both their work and family lives, results support the need for interventions that can mitigate the negative effect of PTSD and other associated mental health conditions on several aspects of work and family quality of life. Findings: contribute to research suggesting both similarities and differences in the post-military readjustment of male and female post-9/11 Veterans and underscore the need for additional consideration of the unique work-related challenges women experience following military service.

References (* indicate 18 featured in article)

- * Bech, P., Olsen, L. R., Kjoller, M., & Rasmussen, N. K. (2006). **Measuring well-being rather than the absence of distress symptoms: A comparison of the SF-36 Mental Health Subscale and the WHO-Five Well-Being Scale.** *International Journal of Methods in Psychiatric Research*, 12(2), 85–91. doi:10.1002/mpr.145
- * Benfer, N., Litz, B.T. (2023). **Assessing and addressing functioning and quality of life in PTSD.** *Current Treatment Options in Psychiatry* 10, 1–20. doi:10.1007/s40501-023-00284-8
- Blake, Beckham, Dillon, Calhoun, Wagner, & Hoggins, S.B. (2022). **Psychosocial well-being among veterans with posttraumatic stress disorder and substance use disorder.** *Psychological Trauma: Theory, Research, Practice, and Policy*, 14(3), 421–430. doi:10.1037/tra0001018
- * Bonfils, K. A., Tennity, C. L., Congedo, B. A., Dolowich, B. A., Hammer, L. A., Haas, G. L. (2022). **Functional outcomes from psychotherapy for people with posttraumatic stress disorder: A meta-analysis.** *Journal of Anxiety Disorders*, 89, 102576. doi:10.1016/j.janxdis.2022.102576
- Carlquist, E., Ulleberg, P., Delle Fave, A., Nafstad, H. E., & Blakar, R. M. (2017). **Everyday understandings of happiness, good life, and satisfaction: Three different facets of well-being.** *Applied Research in Quality of Life*, 12, 481–505. doi:10.1007/s11482-016-9472-9

- Cloitre, M., Koenen, K. C., Cohen, L. R., & Han, H. (2002). **Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse.** *Journal of Consulting and Clinical Psychology, 70*(5), 1067–1074. doi:10.1037/0022-006X.70.5.1067
- Cloitre, M., Jackson, C., & Schmidt, J. A. (2016). **Case reports: STAIR for strengthening social support and relationships among veterans with military sexual trauma and PTSD.** *Military Medicine, 181*(2), e183–e187. doi:10.7205/MILMED-D-15-00209
- * Fivecoat, H. C., Lookatch, S. J., Mavandadi, S., McKay, J. R., & Sayers, S. L. (2023). **Social factors predict treatment engagement in veterans with PTSD or SUD.** *The Journal of Behavioral Health Services & Research, 50*(3), 286–300. doi:10.1007/s11414-022-09823-2
- Fredrickson, B. L. (2001). **The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions.** *American Psychologist, 56*(3), 218–226. doi:10.1037/0003-066X.56.3.218
- * Gallagher, M. W., Phillips, C. A., D'Souza, J., Richardson, A., Long, L. J., Boswell, J. F., Farchione, T. J., & Barlow, D. H. (2020). **Trajectories of change in well-being during cognitive behavioral therapies for anxiety disorders: Quantifying the impact and covariation with improvements in anxiety.** *Psychotherapy, 57*(3), 379–390. doi:10.1037/pst0000283
- Galovski, T. E., Nixon, R., & Kaysen, D. (2020). *Flexible applications of cognitive processing therapy: Evidence-based treatment methods.* Academic Press.
- Gladis, M. M., Gosch, E. A., Dishuk, N. M., & Crits-Christoph, P. (1999). **Quality of life: Expanding the scope of clinical significance.** *Journal of Consulting and Clinical Psychology, 67*(3), 320–331. doi:10.1037/0022-006X.67.3.320
- Glanton Holzhauser, C., Duberstein, P., Ward, E., & Talbot, N. (2022). **Reducing posttraumatic stress disorder symptom severity among depressed women with childhood sexual abuse histories in interpersonal psychotherapy-trauma: The role of improved social functioning.** *Psychological Trauma: Theory, Research, Practice, and Policy.* Advance online publication. doi:10.1037/tra0001293
- Hofmann, S. G., Wu, J. Q., & Boettcher, H. (2014). **Effect of cognitive-behavioral therapy for anxiety disorders on quality of life: A meta-analysis.** *Journal of Consulting and Clinical Psychology, 82*(3), 375–391. doi:10.1037/a0035491
- * Holder, N., Mehlman, H., Delgado, A.K. & Maguen, S. (2022). **The importance of context: Using social determinants of health to improve research and treatment of posttraumatic stress disorder.** *Current Treatment Options in Psychiatry, 9*, 363–375. doi:10.1007/s40501-022-00278-y
- Kearney, D. J., Simpson, T. L. (2015). **Broadening the approach to posttraumatic stress disorder and the consequences of trauma.** *JAMA, 314*(5), 453–455. doi:10.1001/jama.2015.7522
- * Keyes C. L. M. (2007). **Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health.** *The American Psychologist, 62*(2), 95–108. doi:10.1037/0003-066X.62.2.95
- * Lord, K. A., Suvak, M. K., Holmes, S., Shields, N., Lane, J. E. M., Sijercic, I., Wagner, A. C., Stirman, S. W., & Monson, C. M. (2020). **Bidirectional relationships between posttraumatic stress disorder and social functioning during cognitive processing therapy.** *Behavior Therapy, 51*(3), 447–460. doi:10.1016/j.beth.2019.08.002
- * McKnight, P. E., & Kashdan, T. B. (2009). **The importance of functional impairment to mental health outcomes: A case for reassessing our goals in depression treatment research.** *Clinical Psychology Review, 29*(3), 243–259. doi:10.1016/j.cpr.2009.01.005
- McKnight, P. E., Monfort, S. S., Kashdan, T. B., Blalock, D. V., & Calton, J. M. (2016). **Anxiety symptoms and functional impairment: A systematic review of the correlation between the two measures.** *Clinical Psychology Review, 45*, 115–130. doi:10.1016/j.cpr.2015.10.005
- Monson, C. M., & Fredman, S. J. (2012). *Cognitive-behavioral conjoint therapy for posttraumatic stress disorder: Harnessing the healing power of relationships.* Guilford Press.
- Olatunji, B. O., Cisler, J. M., & Tolin, D. F. (2007). **Quality of life in the anxiety disorders: A meta-analytic review.** *Clinical Psychology Review, 27*(5), 572–581. doi:10.1016/j.cpr.2007.01.015
- * Radstaak, M., Hüning, L., Lamers, S., Bohlmeijer, E. T. (2022). **Examining well-being in posttraumatic stress disorder treatment: An explorative study.** *Journal of Traumatic Stress, 35*, 914–925. doi:10.1002/jts.22798
- Reich, K., Nemeth, L., & Acierno, R. (2019). **Evidence-based psychotherapy interventions to improve psychosocial functioning in veterans with PTSD: An integrative review.** *Journal of Psychosocial Nursing and Mental Health Services, 57*(10), 24–33. doi:10.3928/02793695-20190531-04
- Rodriguez, P., Holowka, D. W., & Marx, B. P. (2012). **Assessment of posttraumatic stress disorder-related functional impairment: A review.** *Journal of Rehabilitation Research and Development, 49*(5), 649–665. doi:10.1682/jrrd.2011.09.0162
- * Rottenberg, J., & Kashdan, T. B. (2022). **Well-Being after psychopathology: A transformational research agenda.** *Current Directions in Psychological Science, 31*(3), 280–287. doi:10.1177/09637214221093616
- * Schnurr, P. P., & Lunney, C. A. (2016). **Symptom benchmarks of improved quality of life in PTSD.** *Depression and Anxiety, 33*(3), 247–255. doi:10.1002/da.22477
- * Schnurr, P. P., Lunney, C. A., Bovin, M. J., & Marx, B. P. (2009). **Posttraumatic stress disorder and quality of life: Extension of findings to veterans of the wars in Iraq and Afghanistan.** *Clinical Psychology Review, 29*(8), 727–735. doi:10.1016/j.cpr.2009.08.006

REFERENCES *continued*

- * Trompetter, H. R., Lamers, S. M. A., Westerhof, G. J., Fledderus, M., & Bohlmeijer, E. T. (2017). **Both positive mental health and psychopathology should be monitored in psychotherapy: Confirmation for the dual-factor model in acceptance and commitment therapy.** *Behaviour Research and Therapy*, 91, 58–63. doi:10.1016/j.brat.2017.01.008
- * Vogt, D., Borowski, S., Maguen, S., Blossnich J.R., Hoffmire, C.A., Bernhard, P.A., Iverson, K.M. & Schneiderman, A. (2022). **Strengths and vulnerabilities: Comparing post-9/11 U.S. veterans' and non-veterans' perceptions of health and broader well-being.** *Social Science and Medicine - Population Health*, 19, 101201. doi:10.1016/j.ssmph.2022.101201
- Vogt, D., Taverna E. C., Nillni, Y. I., Booth, B., Perkins, D. F., Copeland, L. A., Finley, E. P., Tyrell, F. A., & Gilman, C. L. (2019). **Development and validation of a tool to assess military veterans' status, functioning, and satisfaction with key aspects of their lives.** *Applied Psychology: Health and Well-Being*, 11(2), 328–349. doi:10.1111/aphw.12161
- * Vogt, D., Smith, B. N., Fox, A. B., Amoroso, T., Taverna, E., & Schnurr, P. P. (2017). **Consequences of PTSD for the work and family quality of life of female and male U.S. Afghanistan and Iraq War veterans.** *Social Psychiatry and Psychiatric Epidemiology*, 52(3), 341–352. doi:10.1007/s00127-016-1321-5