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High rates of PTSD treatment dropout: A possible red herring?☆

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ABSTRACT

Few studies have examined symptom change among dropouts from posttraumatic stress disorder (PTSD) treatment. However, dropout is widely considered a negative event needing to be addressed. The present study investigated PTSD and depression symptom change in patients with PTSD who discontinued psychotherapy. Female civilians ($n = 321$) diagnosed with PTSD participated in two randomized clinical trials examining PTSD treatment outcomes. Of those, 53 were identified as dropouts and included in this study. Symptom change was assessed by clinically significant change (CSC) criteria and symptom end-state criteria. Results demonstrated that considerable proportions of participants (35.85–55.56%) displayed significant improvement and/or met good end-state criteria for PTSD and depression. Results also revealed that participants who displayed symptom improvement were younger, attended more treatment sessions, were married or partnered, and had higher annual household income. Although preliminary, these findings contradict belief that treatment dropouts do not display symptom improvement.
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1. Introduction

Posttraumatic stress disorder (PTSD) is an accumulation of aversive recollections, avoidant behaviors, maladaptive cognitions and heightened emotional and arousal symptoms resulting from experiencing or witnessing a life threatening or violent event (American Psychiatric Association, 2013). Within the United States, the lifetime prevalence rate for PTSD is 8.0%, with women displaying significantly higher rates (11.7%) than men (4.0%; Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012). In recent years, PTSD has gained increased attention as the relationship between PTSD and impairment has become better understood. For instance, individuals with PTSD often display deficits in social (Frueh, Turner, Beidel, & Cahill, 2001), occupational (Taylor, Wald, & Asmundson, 2006) and overall health functioning (Jakupcak, Luterek, Hunt, Conybeare, & McFall, 2008), along with decreases in quality of life (Gill et al., 2014). Moreover, individuals with PTSD are at greater risk for suicide, especially if they present with comorbid depression (Ramsawh et al., 2014).

Fortunately, treatments such as *Cognitive Processing Therapy* (CPT; Resick & Schnicke, 1993) and *Prolonged Exposure* (PE; Foa, Hearst, Dancu, Hembree, & Jaycox, 1994) have been shown to be successful in reducing PTSD symptoms among treatment completers in both civilian (Resick, Nishith, Weaver, Astin, & Feuer, 2002) and Veteran populations (Goodson, Lefkowitz, Helstrom, & Gawrysiak, 2013; Monson et al., 2006). However, recent concerns have been raised about high dropout rates within these gold-standard treatments for PTSD (Gros, Price, Yuen, & Acierno, 2013; Najavits, 2015; Schottenbauer, Glass, Arnkoff, Tendick, & Gray, 2008; Steenkamp, Litz, Hoge, & Marmar, 2015; Szafranski, Gros, Menefee, Norton, & Wanner, 2015). In a recent meta-analysis examining trauma-specific PTSD treatments, the average dropout rate was 36% (Imel, Laska, Jakupcak, & Simpson, 2013). However, PTSD dropout rates vary greatly across studies, with rates ranging from 28% to 68% (Gros et al., 2013; Garcia, Kelley, Rentz, & Lee, 2011). To date, type of treatment (e.g., exposure vs. non-exposure)

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has yet to predict dropout (Goetter et al., 2015). However, dropout is almost universally considered to be a bad outcome.

A likely contributor to the variability of dropout rates is the lack of clear and consistent definition of dropout (Schottenbauer et al., 2008). A variety of definitions of dropout have been used, including participants not attending a specific number of sessions (Gros et al., 2013; Tuerk et al., 2013), loss of contact with participants for a specific number of months (Erbes, Curry, & Leskela, 2009) or voluntary termination prior to achieving predetermined treatment goals, regardless of the number of sessions attended (Garcia et al., 2011; Szafranski et al., 2015). To further compound the problem, a number of treatment studies provide vague descriptions or fail to define dropout entirely (Hembree et al., 2003; Hoge et al., 2014; Teng et al., 2008).

A second limitation within the literature is the dearth of studies examining how symptoms change among dropouts. A widely held belief is that participants who drop out of treatment do not display decreases in PTSD symptomology (Tuerk et al., 2013). However, some researchers have hypothesized that although a large portion of dropouts do not improve, there may be a subset of individuals who display rapid improvement, thus leading to early termination from PTSD treatment (Erbes et al., 2009). Unfortunately, this hypothesis remains largely unexamined as the vast majority of studies have focused on factors outside of symptom change as predictors PTSD dropout due to the lack of available data on symptom change during the course of treatment (e.g., only pre- and post-treatment data for completers). Within the current body of literature, some of the more consistent predictors of PTSD treatment dropout include younger age (Gros, Yoder, Tuerk, Lozano, & Acierno, 2011; Kehle-Forbes, Meis, Spoont, & Polusny, 2015; Szafranski et al., 2016), lower income (Galovski, Blain, Mott, Elwood, & Houle, 2012), lower social support (Gros et al., 2013), and higher pretreatment symptom severity (Garcia et al., 2011). However, these factors have shown to account for only part of the variance explaining dropout from PTSD treatments. This suggests other unexamined factors that negatively effect PTSD treatment completion likely remain. Some studies have found more pragmatic reasons for dropping out such as changes in family demands, jobs, or housing (Szafranski et al., 2015; Teng et al., 2008)

Few studies have specifically examined PTSD symptom change as it pertains to treatment completion and/or dropout (Galovski et al., 2012; Szafranski et al., 2014; Tuerk et al., 2013). In a study examining predictors of length of stay among inpatient PTSD noncompleters, less PTSD symptom improvement predicted shorter length of stay (Szafranski, Gros, Menefee, Wanner, & Norton, 2014). Szafranski et al. hypothesized that participant motivation to continue treatment reduced among individuals with minimal symptom reduction and suggested incorporating techniques such as motivational interviewing in an attempt to reduce dropout risk. Although Szafranski et al. reported a number of clinically relevant findings, it also had a number of limitations. For instance, the study only examined group means and did not examine possible variations in PTSD symptom change among noncompleters. Moreover, participants in this study were Operation Enduring Freedom and Operation Iraqi Freedom male Veteran inpatients and results may not generalize to populations such as civilian women or to outpatient settings. Similarly, among combat Veterans, Tuerk et al. (2013) found that on average, participants who dropped out of outpatient PE treatment for combat related PTSD had significantly less PTSD symptom reduction when compared to treatment completers. Once again, group means were used at posttreatment and variations in symptom change among dropouts was not reported. Moreover, generalizability to civilian populations and non-combat related index traumas is limited.

Interestingly, in an examination of variable session length CPT among male and female civilians diagnosed with PTSD, Galovski et al. (2012) found that 58% of treatment completers reached good end-state criteria (i.e., PTSD and depression symptoms fell below a predetermined cutoff) prior to session 12 of the protocol, resulting in early treatment termination. As a result, these individuals were considered early responders and not dropouts. This finding suggests that a substantial portion of individuals do not need full treatment protocols and it is possible that a portion of dropout is related to actual improvement in PTSD symptomatology (Erbes et al., 2009).

Previous research has used a variety of methods to identify symptom change. Typically, symptom improvement has been defined as scoring below a symptom cutoff (good end-state criteria) or displaying significant reductions in symptomatology (i.e., clinically significant change). Previous studies have implemented good end-state criteria for PTSD (PDS < 21; PSS < 14) and depression (BDI < 19) as a way of signifying readiness for treatment termination and/or no longer meeting significant impairment due to present symptoms (Coffey, Gudmundsdottir, Beck, Palyo, & Miller, 2006; Galovski et al., 2012). However, this method does not capture individuals who have PTSD and/or depression scores above the cutoffs who display significant improvement during the course of treatment.

In studies attempting to examine symptom change from pretreatment, clinically significant change (CSC; Hageman & Arrindell, 1999) is often calculated (Ehlers et al., 2013; Leiner, Kearns, Jackson, Astin, & Rothbaum, 2012; Schnurr & Lunney, 2012). However this method is not without its limitations. For instance, individuals who have high levels of symptomatology may significantly improve during the course of treatment, but may still exhibit clinically relevant levels of symptomatology and impairment. Given the benefits and limitations of each method, this study elected to examine both good end-state and CSC within PTSD treatment dropouts.

The first goal of this study was to examine PTSD and depression symptom change among civilian women who voluntarily terminated PTSD treatment prior to completion. Given that Galovski et al. (2012) found that 58% of participants met good end-state criteria for PTSD and depression prior to session 12, we hypothesized that a substantial proportion of dropouts would display significant PTSD and depression improvement. The second goal of this study was to examine demographic differences between dropouts who responded to treatment versus those who did not. Based on the current literature examining differences between treatment completers and dropouts, it was hypothesized that individuals meeting criteria for CSC recovered/improved and good end-state criteria would be younger in age (Erbes et al., 2009; Kehle-Forbes et al., 2015; Szafranski et al., 2016), married/partnered (Gros et al., 2013) and have higher income (Galovski et al., 2012) when compared to individuals who did not meet CSC recovered/improved or good end-state criteria. The third and final goal of this study was to examine overlap between CSC and end-state criteria findings. Both methods are designed to identify individuals whose symptoms significantly improve during treatment and/or fall below clinical threshold for significant impairment. As a result, it was hypothesized that high concordance rates would be found between the two methods.

2. Methods

2.1. Participants

This study combined participants from two randomized clinical trials assessing PTSD treatment outcomes among civilian women (Resick, Nishith, Weaver, Astin, & Feuer, 2002; Resick et al., 2008). Both studies administer the Clinician-Administered PTSD Scale (CAPS; Blake et al., 1990, 1995) for PTSD diagnostic purposes. Participants who did not meet PTSD criteria based on CAPS evaluations