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Review

Systematic review and meta-analysis of dropout rates in individual psychotherapy for generalized anxiety disorder

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ABSTRACT

Background: Despite being a relatively prevalent and debilitating disorder, Generalized Anxiety Disorder (GAD) is the second least studied anxiety disorder and among the most difficult to treat. Dropout from psychotherapy is concerning as it is associated with poorer outcomes, leads to service inefficiencies and can disproportionately affect disadvantaged populations. No study to date has calculated a weighted mean dropout rate for GAD and explored associated correlates.

Methods: A systematic review was conducted using PsycINFO, Medline and Embase databases, identifying studies investigating individual psychotherapies for adults with GAD. Forty-five studies, involving 2224 participants, were identified for meta-analysis.

Results: The weighted mean dropout rate was 16.99% (95% confidence interval 14.42%–19.91%). The *Q*-statistic indicated significant heterogeneity among studies. Moderator analysis and meta-regressions indicated no statistically significant effect of client age, sex, symptom severity, comorbidity, treatment type, study type (randomized trial or not), study quality, number of sessions or therapist experience.

Conclusions: In research investigating psychotherapy for GAD, approximately one in six clients can be expected to drop out of treatment. Dropout rate was not significantly moderated by the client, therapist or treatment variables investigated. Future research should specify the definition of dropout, reasons for dropout and associated correlates to assist the field's progression.

1. Introduction

Generalized Anxiety Disorder (GAD) consistently falls behind all other anxiety disorders, with the exception of specific phobias, in terms of quantity of research publications (Dugas, Anderson, Deschenes, & Donegan, 2010). This is concerning, given that GAD has a 12-month prevalence of 1.7–3.4% (Wittchen et al., 2011), can have a chronic course with multiple associated psychiatric comorbidities, and is associated with an elevated risk of suicide (Andrews et al., 2010; Wehry, Beesdo-Baum, Hennelly, Connolly, & Strawn, 2015). Yet, GAD is one of the least successfully treated anxiety disorders (Waters & Craske, 2005). Consequently, this diagnosis warrants further treatment research.

Despite these challenges, reviews and practice guidelines have described the established efficacy of pharmacological treatments such as selective serotonin reuptake inhibitors (SSRIs), and psychological treatments such as Cognitive Behavioral Therapy (CBT) for GAD (Allgulander & Baldwin, 2013; Baldwin, Woods, Lawson, & Taylor, 2011; NICE, 2011). In fact, a recent meta-analysis (Cuijpers et al., 2014) of psychological therapies for GAD found a significant overall effect (Hedges g = 0.84), which can be considered a large effect size (Durlak, 2009). This is consistent with a number needed to treat (NNT) of 2.23, indicating that approximately two patients need to be treated with psychological therapy to generate one positive outcome (Cuijpers et al., 2014). A Cochrane review found no significant difference in outcomes between different psychological treatments for GAD (Hunot, Churchill,

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Silva de Lima, & Teixeira, 2007). There has also been some suggestion that psychotherapy may be preferable to pharmacotherapy due to reduced treatment discontinuation (Mitte, 2005), however there is also evidence that pharmacological treatments are associated with larger effect sizes than psychotherapy for GAD (Bandelow et al., 2015).

Treatment dropout is an important indicator of treatment acceptability and client engagement. Individuals that drop out of therapy tend to have poorer outcomes (Klein, Stone, Hicks, & Pritchard, 2003; McMurran, Huband, & Overton, 2010). Dropout can dilute the benefits of treatment, and interfere with the dissemination of evidence based treatments (Di Bona, Saxon, Barkham, Dent-Brown, & Parry, 2014). Dropout can also influence therapist morale, impact organizations revenue and lead to inefficiencies in service delivery systems (Barrett et al., 2009; Klein et al., 2003; McMurran et al., 2010).

Efforts have been made to develop treatment protocols for GAD aimed at increasing retention (Behar & Borkovec, 2010; Newman et al., 2011; Westra, Antony, & Constantino, 2016). These efforts need to be supported by a clear understanding of the typical dropout rate in psychotherapy for GAD, as well as a specification of what factors are associated with dropout, including characteristics of patients, therapists and treatment modality. Understanding differential dropout rates across GAD treatments can also elucidate whether certain types of treatment pose particularly difficulties in terms of patient engagement. This type of analysis has been conducted in other disorder groups including depression (Cooper & Conklin, 2015), borderline personality disorder (Barnicot, Katsakou, Marougka, & Priebe, 2011) and post-traumatic stress disorder (Imel, Laska, Jakcupcak, & Simpson, 2013) but not with GAD.

The relevant published data addressing dropout in GAD are limited. In their Cochrane Review of outcomes of psychological therapy for GAD, Hunot et al. (2007) found a dropout rate of 15.6%. Yet, this review calculated an overall mean dropout rate rather than a weighted mean that accounts for sample size. Additionally, the analysis was limited to randomized controlled trials and there is evidence that less controlled settings may have higher rates of dropout. For example, one small uncontrolled study of GAD in a community setting found a dropout rate of 72% (Kehle, 2008). Another review of dropout across multiple diagnoses found a similar rate of dropout in GAD of 15.2% (Swift & Greenberg, 2014). That review also included pharmacological treatments and group-based treatments as well as some participants under the age of 18. A focus on individual psychotherapy for adults excluding the potentially confounding effects of medication might yield a more precise estimate of dropout rates in GAD. Furthermore, no study to date has investigated moderators of dropout in GAD.

The present study had two aims. The first was to conduct a systematic review and meta-analysis of the research on individual psychotherapy for GAD and identify a weighted mean dropout rate. The second aim was to determine whether participant, therapist, treatment or study factors might influence dropout rates and account for any heterogeneity across studies in rates of dropout.

2. Method

This systematic review was conducted in accordance with PRISMA guidelines (Moher et al., 2015).

2.1. Search strategy

The PsycINFO, Medline and Embase databases were searched on 13th September 2016 using the search terms “generali* anxiety” AND “*therapy” OR “trial” OR “treatment,” where the * symbol allows for any suffix or prefix to be captured by the search strategy. We also checked the reference list of relevant review papers (Cuijpers et al., 2014; Hunot et al., 2007) and included studies in order to identify references not captured by the database search.

2.2. Inclusion criteria

1) Participants were diagnosed with GAD using a structured assessment.
2) Participants were aged 18 and over.
3) A dropout rate was reported or able to be calculated from the data presented.
4) The study involved face-to-face individual psychological therapy.
   a. This involved excluding case studies and studies with a treatment arm involving medication only, group therapy, online therapy and self-help.
5) The study was not a secondary analysis of a previously published study.
6) The study was published in 1980 or after.
7) The study was published in English.

The decision to exclude children and include older adults was made on the basis that the aims of the study were related to psychotherapy for adults, and is consistent with inclusion criteria for other reviews focused on GAD (Cuijpers et al., 2014) and dropout (Cooper & Conklin, 2015).

2.3. Screening procedures

The initial search yielded 1871 abstracts and the removal of duplicates yielded 888 unique studies that were screened by the first author based their title and abstract. Difficulties with classification of studies were resolved through discussion with co-authors (DJH and SMR). The most common reasons for exclusion were that the study involved medication treatment (n = 333) or was a theoretical or review article (n = 144). The flow of studies and reason for exclusion are presented in Fig. 1. Ninety-three full text articles were screened according to the above inclusion criteria, and among these the most common reasons for exclusion were that the study was a secondary analysis of a primary study already included in the analysis, or that the study was not investigating an individual psychotherapy for GAD. In addition to the 42 studies yielded from the research strategy, 3 papers were included based on being in the reference list of recent reviews of the psychological therapy literature for GAD (Cuijpers et al., 2014; Hunot et al., 2007).

2.4. Data extraction

Data from included studies was extracted by the first author, with any difficulties being discussed with co-authors that were not involved in the inter-rater reliability checks (reported below). Studies were coded according to country of publication, number of participants (including by gender), proportion of participants with at any comorbidity (other diagnoses besides GAD), treatment type, number of sessions, and therapist experience in years. Severity measures were selected based on the frequency with which measures were used across studies. Clinician rated severity was rated according to scores on the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; DiNardo, Brown, & Barlow, 1994). Client rated severity was rated using Penn State Worry Questionnaire scores (Meyer, Miller, Metzger, & Borkovec, 1990). Where the selected severity measures were not used, studies were excluded from moderator analyses relating to severity.

The coding of dropout is complicated by the different definitions that are used across the included studies. For our purposes, we accepted the definition of dropout provided by the study being coded. For randomized controlled trials, withdrawing from a study prior to being randomized was not considered dropout. Additionally, given that we were interested in dropout from psychotherapy, we did not include rates of dropout from research interviews. Where no explicit definition of dropout was provided, we used failure to complete treatment as the definition of dropout. We coded dropout at a study level and also the treatment level, where the appropriate data were available to calculate