Predictors of dropout from community clinic child CBT for anxiety disorders

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ABSTRACT

The aim was to investigate predictors of treatment dropout among 182 children (aged 8–15 years) participating in an effectiveness trial of manual-based 10-session individual and group cognitive behavior therapy (CBT) for anxiety disorders in community clinics. The dropout rate was 14.4%, with no significant difference between the two treatment conditions. We examined predictors for overall dropout ($n = 26$), early ($\leq$session 4, $n = 15$), and late dropout ($\geq$session 5, $n = 11$). Overall dropout was predicted by low child and parent rated treatment credibility, and high parent self-rated internalizing symptoms. Low child rated treatment credibility predicted both early and late dropout. High parent self-rated internalizing symptoms predicted early dropout, whereas low parent rated treatment credibility predicted late dropout. These results highlight the importance of addressing treatment credibility, and to offer support for parents with internalizing symptoms, to help children and families remain in treatment.

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Treatment dropout is a challenge in child and adolescent mental health care with a dropout rate up to 50% reported for children treated in community mental health clinics (de Haan, Boon, de Jong, Hoeve, & Vermeiren, 2013; Wierzbicki & Pekarik, 1993). Dropout from therapy has been shown to negatively impact both clients and therapists (Pekarik, 1992; Swift & Greenberg, 2012), and is associated with inefficient use of services (Armbruster & Kazdin, 1994; Pekarik, 1985). Also, treatment dropout impedes the delivery of otherwise efficacious treatments, such as cognitive behavior therapy (CBT), which is an evidence-based treatment for anxiety disorders in children (James, James, Cowdrey, Soler, & Choke, 2013; Silverman, Pina, & Viswesvaran, 2008).

Identifying predictors of treatment dropout for children with anxiety disorders are important, since these disorders are both highly prevalent (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003), and are associated with increased risk of later anxiety, depression and substance abuse disorders (Rapee, Schniering, & Hudson, 2009). Anxious children are often shy and withdrawn, making them challenging to engage in the therapy. Furthermore, CBT entails exposure tasks, which may cause discomfort and may trigger avoidance behavior (Kendall et al., 2009). Identifying predictors for treatment dropout could therefore help identify children at risk for dropout for whom interventions to promote continuation could be implemented (Kendall & Sugarman, 1997; Nock & Kazdin, 2005; Pina, Silverman, Weems, Kurtines, & Goldman, 2003).

To date, only three studies have examined predictors of treatment dropout in child anxiety therapies (Gonzalez, Weersing, Warnick, Scahill, & Woolston, 2011; Kendall & Sugarman, 1997; Pina et al., 2003). Two of the studies were randomized controlled efficacy CBT trials conducted at specialized university child anxiety

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clinics. In the first of these studies, dropouts more often had been randomized to the wait-list condition, came from single parent families, and reported less self-rated anxiety symptoms at baseline (Kendall & Sugarman, 1997). In the other study, no significant differences between treatment completers and dropouts were found (Pina et al., 2003). In these two studies, the dropout rate was similar, at 23.2% and 22.6%, respectively. In contrast to these two studies, Gonzalez et al. (2011) examined predictors of overall dropout, and predictors of early (session 2–6) and late (≥7 session) dropout from uncontrolled eclectic youth anxiety treatment in a community clinic. The authors reported that overall dropout was predicted by higher caregiver-rated youth depressive symptoms at pretreatment. When distinguishing between early and late dropout from treatment, early dropout was predicted by ethnic minority status, whereas late dropout was predicted by higher caregiver-rated youth depressive symptoms. In this study, the dropout rate was high, at 51.3%.

In sum, there are few studies investigating predictors of dropout in child anxiety treatment, and findings are scarce. Importantly, past studies have focused mainly on identifying demographic factors or child and parent clinical factors (e.g., child symptoms of anxiety, depression, and externalizing behavior, and parent symptoms of anxiety and depression) associated with dropout. Although these factors are related to treatment dropout in child mental health services (de Haan et al., 2013), they provide little information on reasons for children's failure to complete treatment (Nock & Ferriter, 2005). Moreover, demographic factors are unlikely to change during treatment. Identifying factors that are amenable to change at treatment onset could serve a preventive function, as these could be addressed before and during the early phase of therapy to promote continuation (de Haan et al., 2013; Greenberg, Constantino, & Bruce, 2006; Kazdin, 1996).

Possible factors amenable to change early in treatment include the underlying processes of treatment variables such as treatment belief factors. Kazdin, Holland, and Crowley (1997) developed the "Barriers to treatment" model, referring to stressors and obstacles associated with treatment participation, including perceptions that treatment is demanding and not relevant to the child's problem. Including treatment belief factors in predictor studies of dropout could improve our understanding of dropout in children with anxiety disorders.

Two such treatment belief factors are the (1) the child's motivation (i.e., child acknowledgement of problems, perceived distress, and willingness to change; Keijsers, Schaap, Hoogduin, Hoogsteyns, & de Kemp, 1999), and (2) perceived treatment credibility (i.e., how logical, plausible and believable the treatment is perceived to be; Kazdin, 1979). As most children do not seek treatment themselves, motivation for entering and remaining in treatment may be lower than in adult patients. For developmental reasons, children may have limited or inaccurate perceptions of what treatment entails. In adults, low motivation for treatment, poor treatment credibility, low readiness for change, preference for a particular treatment, and poor therapeutic alliance, have been associated with dropout in CBT for anxiety disorders (Taylor, Abramowitz, & McKay 2012). Motivation and treatment credibility may be particular relevant in treatment of anxious children, in order to face demanding exposure tasks in CBT (Kendall et al., 2009). To date, these factors have not been examined in relation to dropout in studies of children with anxiety disorders.

Alongside treatment beliefs, children's self-beliefs may also influence their risk of dropping out from treatment. Anxious children tend to report negative self-instructions in anxiety-provoking situations, which may challenge their treatment endurance (Silk et al., 2013). Children's self-concept, defined as their self-competence and self-worth (Beck, Beck, & Jones, 2001), has been found to be related to endurance, positive coping strategies, and

achievement (Bong & Skaalvik, 2003). Thus, self-concept is a possible predictor of dropout from child anxiety treatment that is warranted investigation.

Although child self- and treatment beliefs may influence dropout risk, parents are important agents in seeking help and treatment for the child, and are often the main agents in helping the child adhere to treatment (Armbruster & Kazdin, 1994). Furthermore, parents regularly participate in the treatment programs for child anxiety (Breinholst, Esbjorn, Reinholdt-Dunne, & Stallard, 2012). Parental depression and anxiety may interfere with their ability to support their child's treatment. In treatment studies of child conduct disorders, parent psychopathology has been found to be related to dropout, with depressed, and stressed parents being less able to follow up on clinical appointments (Kazdin, 1996). The effect of parents' anxiety and depressive symptoms on dropout from child anxiety treatment has only been examined in one study (Kendall & Sugarman, 1997). Although this university clinic trial found no association between parental internalizing symptoms and dropout, these results may not be generalizable to community clinics. Higher levels of life stressors have been reported for families in community clinics compared to research clinics (Southam-Gerow, Chorpita, Miller, & Gleacher, 2008; Southam-Gerow, Weisz, & Kendall, 2003), that may negatively affect parent's emotional well being, and thus their ability to follow up on the child's treatment. Thus, parental internalizing symptoms are important to evaluate as potential predictors of dropout in community clinics.

In addition to the challenge of identifying relevant predictors of dropout, another methodological problem in this field of research is the variation in methods used to operationalize treatment dropout. Two child anxiety studies defined dropout as failure to complete a treatment protocol, i.e., dropout prior to completing the full course on an intervention (Kendall & Sugarman, 1997; Pina et al., 2003); whereas one study defined dropout by therapist judgment, i.e., after a client discontinued therapy, the therapist decided whether the client dropped out prematurely (Gonzalez et al., 2011). This variation in dropout definitions makes results across studies difficult to compare. However, different definitions of dropout may be relevant depending on the question under study. For instance, efforts to implement evidence-based treatments for children with anxiety disorders are currently carried out in community clinics. CBT programs for children with anxiety disorders commonly have a predefined number of sessions in the treatment protocol, with exposure tasks often instituted mid-treatment. Thus, when delivering CBT programs in community clinics, it would be relevant to examine the rate of participants that do not complete a full treatment protocol, and associated predictors of dropout.

Another relevant distinction of dropouts is between children who drop out early and late in treatment. Different factors may be associated with dropout from a specific phase in the treatment process, and collapsing early and late dropouts into one group could therefore mask important differences (Kazdin & Mazurick, 1994). One may expect that early dropout relates more to pretreatment symptoms and functions, while late dropout could relate more to the form and content of the treatment itself. It has been found that the majority of dropout occurs early in treatment (Garfield, 1994), and early dropout is associated with poorer outcomes (Pekarik, 1992). If specific predictors of early dropout could be identified, these could be targeted early in treatment in an attempt to prevent dropout. Similarly, predictors associated with late dropout could be addressed during treatment to help families remain in treatment. Gonzalez et al. (2011) found that predictors of treatment dropout were related to when in the treatment process dropout occurred, distinguishing between overall, early and late dropout. Furthermore, in a study of self-help treatment for adults with anxiety, the introduction of exposure tasks seemed to challenge treatment compliance (Holden, O'Brien, Barlow, Stetson, & Infantino, 1983). Thus,