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FRIENDS for Life: Implementation of an indicated prevention program targeting childhood anxiety and depression in a naturalistic setting☆

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ABSTRACT

We assessed the implementation characteristics and children's appraisal of FRIENDS for Life, a school-based prevention program targeting childhood anxiety and depression, and its relation to program outcomes. Prevention workers delivered the program using specific therapeutic skills, but did not adhere completely to the protocol. However, this appeared not to negatively affect program outcomes. We found few other significant associations between program integrity and outcomes. Children's participation was good and they appraised the program positively. Children rated the program more positively when protocol adherence was lower. In conclusion, a highly protocolled intervention can be successfully transferred to daily school practice.

1. Introduction

Anxiety and depression are common mental health problems in children (Beesdo, Knappe, & Pine, 2009). Symptoms of anxiety and depression in children and adolescents are associated with poor school performance, substance use and abuse, and suicidal behavior (Birmaher, Arbelaez, & Brent, 2002; Woodward & Fergusson, 2001). Moreover, children with untreated anxiety and depressive symptoms are at elevated risk for anxiety disorders and recurrent and more severe depressive episodes in later life (Beesdo et al., 2007; Birmaher et al., 2002; Fergusson & Woodward, 2002). Consequently, prevention of childhood anxiety and depression is important.

FRIENDS for Life is a program aimed at preventing anxiety and depression in children (Barrett, 2004a, 2004b). Although the majority of FRIENDS for Life studies reported positive effects on anxiety or depression symptoms (Barrett P, 2001; Bernstein, Layne, Egan, & Tennison, 2005; Essau, Conradt, Sasagawa, & Ollendick, 2012), much less is known about the implementation of FRIENDS for Life and the possible impact of implementation quality (program integrity) on the program's effectiveness.

The way in which a program is implemented may influence its effectiveness in positive or negative ways (Dane & Schneider, 1998; Durlak & DuPre, 2008). Although the protocols of interventions – including FRIENDS for Life – generally thoroughly describe how the program should be implemented, deviations from protocols regularly occur when a program is executed outside the research setting. It is therefore important to evaluate the extent to which program outcomes may be affected by program integrity.

Several studies investigating FRIENDS for Life as a prevention program addressed program integrity. Most studies assessed adherence to protocol, and no study reported poor program integrity (e.g., Barrett, Lock, & Farrell, 2005; Essau et al., 2012; Rodgers & Dunsmuir, 2013). However, no study investigated the association between program

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integrity and effectiveness of FRIENDS for Life in an existing preventive setting. Furthermore, previous studies have several limitations that make it difficult to draw firm conclusions on program integrity and its influence on program outcomes.

First, some studies used implementer-reported data about adherence to protocol (e.g., Barrett, 2001; Barrett et al., 2005; Essau et al., 2012). This kind of report may be prone to socially desirable answers (Dane & Schneider, 1998). Second, not all studies quantified their results, but reported for instance that program integrity was high, or that no deviations from the protocol were noted (Barrett, Moore, & Sonderegger, 2000; Dadds, Spence, Holland, Barrett, & Laurens, 1997; Lowry-Webster, Barrett, & Lock, 2003). However, quantification is needed to test the association between program integrity and program outcomes. Third, the majority of studies of FRIENDS for Life reported only one or two aspects of program integrity, mainly adherence to protocol (Barrett P, 2001; Miller et al., 2011). In literature, it is recommended to investigate multiple aspects of program integrity (Dane & Schneider, 1998; Durlak & DuPre, 2008). For example, a program may be implemented completely according to protocol, but if participants were absent during numerous sessions, program integrity is still not optimal. Fourth, up till now, the implementation of FRIENDS for Life has been studied only in research-controlled settings, i.e., with extra training and evaluation for implementers (e.g., Barrett et al., 2005; Essau et al., 2012; Miller et al., 2011). Findings from these studies are not generalizable to implementation in naturalistic settings.

An additional aspect that may affect the implementation and effectiveness of a prevention program is participants' appraisal of the program, also referred to as social validity. Even if an effective program is implemented with high program integrity, participants are likely to withdraw from the intervention if they do not like it. In the longer term, this may hamper the sustainability and dissemination of the program. Previous studies showed that children and parents positively evaluated FRIENDS for Life (Barrett, Sonderegger, & Sonderegger, 2001; Cooley, Boyd, & Grados, 2004; Lowry-Webster et al., 2003). However, previous findings regarding the association between social validity and a reduction of symptoms of anxiety or depression are not univocal (Barrett et al., 2000; Essau, Conradt, & Ederer, 2004; Gallegos-Guajardo, Ruvalcaba-Romero, Garza-Tamez, & Villegas-Guinea, 2013).

The present study aims to address the above-mentioned gaps in the literature with a comprehensive process evaluation of FRIENDS for Life as an indicated preventive school-based intervention for children with elevated levels of anxiety or depression symptoms but not a clinical disorder. FRIENDS for Life has been implemented in Amsterdam, the Netherlands, as part of an existing prevention strategy since 2007. We included all FRIENDS for Life groups in two consecutive school years in a quasi-experimental trial, and asked the prevention workers to implement the program as they were used to doing it (Kösters, Chinapaw, Zwaanswijk, Van der Wal, Utens, & Koot, 2012). Prevention workers received no specific or additional training or supervision during the trial. In this way, we were able to study implementation and outcomes under naturalistic conditions. Results of the concurrent trial show that children who participated in FRIENDS for Life self-reported a strong reduction in anxiety and depression symptoms in comparison to controls, towards levels comparable to children from the general population at 12 months post-intervention (Kösters, Chinapaw, Zwaanswijk, Van der Wal, & Koot, 2015).

In the present study, we examined four aspects of program integrity using live observations: (a) adherence to protocol; (b) quality of delivery; (c) participant responsiveness (children's participation in the sessions); and (d) exposure to the program (Dane & Schneider, 1998; Dusenbury, Brannigan, Falco, & Hansen, 2003). In addition, children's appraisal of the program was assessed, as well as the association of each of these aspects with program outcomes. We aimed to address the following questions:

1. Was FRIENDS for Life, a highly protocolled prevention program, delivered with program integrity when implemented in a naturalistic setting*
2. Were there any differences between specific subgroups (regarding sex, age, ethnicity, and severity of initial symptoms) of children regarding program integrity and appraisal*
3. How did participating children appraise FRIENDS for Life when implemented in a naturalistic setting*
4. Are implementation characteristics and children's appraisal of the program in a naturalistic setting associated with program outcomes*

2. Methods

2.1. Procedures and participants

This process evaluation is part of a larger quasi-experimental trial evaluating the effects of FRIENDS for Life, in which the intervention group received the FRIENDS for Life program, while the control group received no intervention (Kösters, Chinapaw, Zwaanswijk, Van der Wal, Utens, & Koot, 2012). In the present study, only data from the intervention groups were used. FRIENDS for Life was implemented in grades 6, 7 and 8 of elementary schools (comparable with grades 4, 5 and 6 in US schools) in Amsterdam, the Netherlands. During the school years 2010–2011 and 2011–2012, 35 FRIENDS for Life intervention groups were initiated at 23 elementary schools in Amsterdam. Per school, up to 11 children with the highest anxiety and depression scores (as measured by the Revised Child Anxiety and Depression Scale (RCADS), see Measures) and/or those indicated by the school teacher (e.g., for being shy or withdrawn, (socially) anxious, inhibited, or being bullied) were eligible for participation. The school and the prevention workers composed a group that was balanced regarding age and sex. Finally, the school, prevention workers, parents and each child together decided on participation (Kösters, Chinapaw, Zwaanswijk, Van der Wal, Utens, & Koot, 2012). Children and parents received information about the study and gave written permission if they wished to participate in the study. The (VU University) Medical Ethics Committee, the Netherlands, approved the study protocol.

The intervention group consisted of 339 children, six of whom did not start the program (main reason: second thoughts about participation) and five were excluded from FRIENDS by the prevention workers because of disruptive behavior. Participating children were 8–13 years old ($M = 10.6$, $SD = 0.9$), and 62% were girls. Children were of Dutch (20%), Turkish (12%), Moroccan (22%), Surinamese/Antillean (16%), other Western (8%), other non-Western (20%), and unknown (3%) descent.

2.2. Intervention

FRIENDS for Life is based on cognitive behavior therapy (CBT) (Barrett, 2004a, 2004b). Children learn how to cope with anxiety and depression by learning several skills and strategies. The program consists of 10 sessions, two booster sessions (one and three months after finishing the program), and two parent sessions.

In Amsterdam, the Netherlands, the Dutch translation of FRIENDS for Life was implemented (Utens & Ferdinand, 2006a, 2006b). Each group was led by two prevention workers (out of a pool of 21) from a local mental health organization. The 10 child sessions lasted 1.5 h each and were conducted once a week during the school day. The implementation of booster and parent sessions deviated from the original protocol: as prevention workers noticed time constraints of schools and low attendance of parents, the implementation of only one booster session (one month after the program) and one parent session (halfway through the program) has become common practice in Amsterdam over the years. The program started two times a year, after the summer break and after the Christmas break.