

Journal of Loss and Trauma

International Perspectives on Stress & Coping

ISSN: 1532-5024 (Print) 1532-5032 (Online) Journal homepage: <https://www.tandfonline.com/loi/upil20>

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To cite this article: Vivian Kraaij, Nadia Garnefski, Huguette Fles, Anouk Brands & Suzanne van Tricht (2016) Effects of a Self-Help Program on Depressed Mood for Women with an Unfulfilled Child Wish, *Journal of Loss and Trauma*, 21:4, 275-285, DOI: [10.1080/15325024.2015.1057451](https://doi.org/10.1080/15325024.2015.1057451)

To link to this article: <https://doi.org/10.1080/15325024.2015.1057451>



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Accepted author version posted online: 09 Jul 2015.
Published online: 16 Feb 2016.



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Effects of a Self-Help Program on Depressed Mood for Women with an Unfulfilled Child Wish

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ABSTRACT

This randomized controlled trial aimed to examine the effectiveness of a cognitive behavioral self-help program (CBS) with minimal coaching in improving depressed mood for women with a permanent unfulfilled child wish. Participants completed pretest, posttest, and follow-up questionnaires and were randomly allocated to CBS ($n=27$) or a waiting list condition (WLC, $n=27$). Respondents who followed the CBS improved significantly on depression scores compared to the WLC. This positive effect remained at follow-up. This study suggests that a low-resource, low-cost self-help program could be an effective intervention in reducing depressed mood in women living with the loss of a desired child.

ARTICLE HISTORY

Received 29 September 2014
Accepted 21 November 2014

KEYWORDS

Depression; loss; psychological intervention; self-help program; unfulfilled child wish

Introduction

“Trying not to feel the pain, the sadness, the anger, the jealousy, makes me feel sad and depressed.” “Especially around Christmas I get confronted with my unfulfilled child wish and I realize how much I still suffer.” “It feels like deep mourning” (Three women with an unfulfilled child wish; present study).

For most people, having children is an essential part of life (van Balen & Bos, 2004). Consequently, infertility can be experienced as a major blocking of an important life goal and remaining childless can be seen as a severe loss or life stressor (Meyers et al., 1995; van Balen, 2001). About 10–15% of couples have infertility problems, and after examination and treatment, about 3–5% of the couples with a wish to have a child remain childless (Brkovich & Fisher, 1998). Some couples go on to fulfill their child wish in another way, for example by adopting a child. However, people can face several barriers in this process, such as stigma around adoption, high costs, and strict adoption policies. Consequently, adoption rates remain relatively low (Park & Hill, 2014). For most people with an unfulfilled child wish, facing a future without children leads to much suffering (van Balen & Bos, 2004; Wirtberg,

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Moller, Hogstrom, Tronstad, & Lalos, 2007). Several studies have shown that people with a permanent unfulfilled child wish report lower levels of well-being and higher levels of distress (Lechner, Bolman, & van Dalen, 2007; van Balen & Trimbos-Kemper, 1993). This is not only so in the short term, but also in the longer term, with an increase in levels of distress when the peer group enters the grandparents phase (Wirtberg et al., 2007). Consequently, the group of people who are involuntarily childless can be considered in need of emotional help in learning how to cope with the loss of a desired child (Kraaij, Garnefski, & Schroevers, 2009; Lechner et al., 2007; Wirtberg et al., 2007).

A number of psychological programs have been developed for people receiving infertility treatment (for a review, see Boivin, 2003). The majority of these interventions employ cognitive behavioral techniques (CBT) (Domar et al., 2000; Faramarzi et al., 2008; Sexton, Byrd, O'Donohue, & Jacobs, 2010). Other interventions are based on acceptance and commitment therapy (Peterson & Eifert, 2011), a body-mind approach (Lemmens et al., 2004), interpersonal psychotherapy (Koszycki, Bisserbe, Blier, Bradwejn, & Markowitz, 2012), or expressive writing (Matthiesen et al., 2012). Overall, these programs showed positive effects on lowering levels of distress and reducing negative affect. Despite these promising findings, we were unable to locate studies focusing on psychological programs for people who remain childless. People with an unfulfilled child wish seem reluctant to disclose their infertility problems, which makes it more difficult for them to receive support or professional help (Myers & Wark, 1996). Therefore, easily accessible and anonymous programs for this specific group should be developed.

Self-help programs have received more attention the last couple of years. Self-help has a number of advantages over face-to-face therapy (Gregory, Canning, Lee, & Wise, 2004; Papworth, 2006). Self-help programs have the potential to reach a higher number of people, especially those who experience social and geographical barriers to entering psychotherapeutic services. In addition, self-help programs are self-empowering; people can follow these programs at their own time and own place. Furthermore, the costs are usually much lower than the costs of psychotherapy contact. There is scientific evidence that self-help programs have an effect on psychological symptoms. Studies on the effectiveness of self-help programs based on CBT show that people with depression benefit from these interventions (Gellatly et al., 2007; Gregory et al., 2004). Furthermore, studies show that the effectiveness of these self-help programs is larger when participants receive some form of support (Gellatly et al., 2007).

Following on this, the aim of the present study was to test the effectiveness of a new cognitive behavioral self-help program with minimal coaching for people with a permanent unfulfilled child wish. In a randomized controlled trial (RCT), people following the CBT self-help program (CBS)

were compared with a waiting list control group (WCL) on depressed mood. Since research has shown that women with definite involuntary childlessness experience greater distress than men (Jordan & Revenson, 1999), this RCT focused on women as a first step.

Methods

Procedures

After obtaining permission from the Ethics Committee of the University, participants were recruited through calls from patient organizations, announcements in a number of magazines, flyers, and forums on the Internet. In the call, women who were definitively childless against their wish, who had finished medical treatment, and who subsequently experienced depressed mood were invited to visit a website with all relevant information about the self-help program and accompanying study. In addition, this website offered a short checklist to screen for depressive symptoms with the PHQ-9 (which has been proven to be a good [freely available] screening instrument; Kroenke, Spitzer, & Williams, 2001). People with a score ≥ 15 were advised to contact their general practitioner instead of participating in the self-help program, as people with more severe levels of depression are usually better off with face-to-face contact. However, people were welcome to enter the program regardless of their PHQ-9 score. Women who adopted a child, or who took care of stepchildren, were excluded from participation. If women were interested to participate, they could register for participation by filling in a form on the website. In addition to providing their personal information, they had to declare by ticking a box the following: (a) to be definitely childless against their wish, (b) to experience regular negative thoughts and feelings, and (c) to have the time and motivation to work on the program. They subsequently received an e-mail with the invitation to fill in an online questionnaire (baseline assessment) through a secured website. After giving informed consent, participants could fill in the online questionnaire. Next, participants were randomly allocated based on a computer-generated list of random numbers. Respondents who were allocated to the CBS condition received the self-help program at home by regular mail (for more details of the program, see study conditions). People worked on the program during 4 weeks. During this period, the participants received minimal coaching. They were contacted weekly by telephone by a psychologist in clinical training in order to provide motivation, inquire about progress, and answer questions. After completion of the program and again 1 month later, participants completed the first and second posttest through the secured website. After completing the second posttest, participants in the WCL condition received the self-help program by regular mail. No coaching was offered.

Participants

A total of 54 women who were definitively childless against their wish were interested to participate in the study and filled in the baseline questionnaire. All respondents were randomly allocated to either CBS or WLC. Figure 1 shows a flow diagram. The final sample consisted of all respondents who filled in the baseline measurement and either the first or second posttest (or both the first and second posttest) in order to regain as many respondents in the data analyses as possible (to retain power). The final sample (18 respondents in the CBS condition and 26 respondents in the WCL condition) did not differ from the people who dropped out or were excluded from the analyses on any of the demographic and definitive childlessness characteristics.

The mean age of the women who participated was 43 years (see Table 1). The majority were married or living together and over half followed higher education (college or university). On average people had harbored a child wish for 16 years and had known that the childlessness was definitive for 6 years. In two thirds of the cases, the respondent herself had the physical

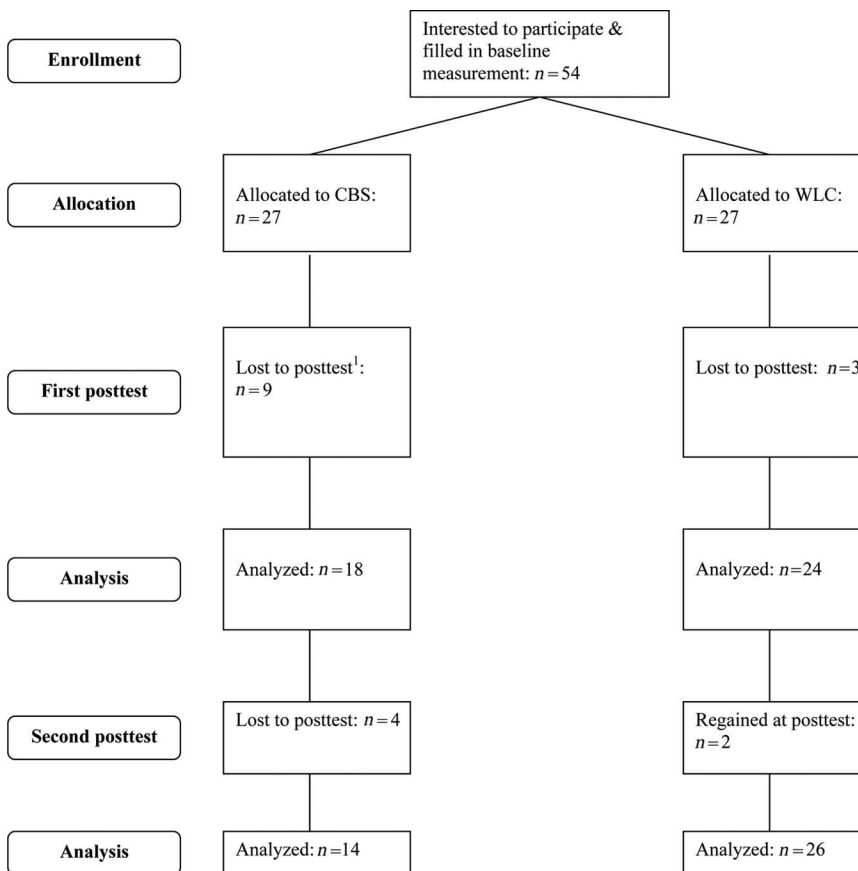


Figure 1. Flow diagram. Note. ¹One respondent removed from dataset, reason: outlier due to physical problems caused by chronic disease.

Table 1. Demographic and definitive childlessness characteristics for participants in CBS and WLC.

	Total (<i>n</i> = 44)	CBS (<i>n</i> = 18)	WLC (<i>n</i> = 26)
Demographic characteristics			
Mean age + SD, years	42.84 + 7.93	44.56 + 9.01	41.65 + 7.02
Educational level, <i>n</i> (%)			
Lower	19 (43.2%)	7 (38.9%)	12 (46.2%)
Higher (college/university)	25 (56.8%)	11 (61.1%)	14 (53.8%)
Marital status, <i>n</i> (%)			
Single	6 (13.6%)	3 (16.7%)	3 (11.5%)
Married/cohabiting	38 (86.4%)	15 (83.3%)	23 (88.5%)
Childlessness characteristics			
Time since child wish + SD, years	15.59 + 11.13	16.06 + 9.66	15.27 + 12.20
Time since definitive childlessness + SD, years	6.20 + 9.08	7.78 + 10.09	5.12 + 8.34
Who has physical cause of infertility, <i>n</i> (%)			
Self or both	29 (65.9%)	12 (66.7%)	17 (65.4%)
Partner or unknown	15 (34.1%)	6 (33.3%)	9 (34.6%)
Received medical treatment, <i>n</i> (%)			
Yes (self or both)	35 (79.5%)	14 (77.8%)	21 (80.8%)
No (neither)	9 (20.5%)	4 (22.2%)	5 (19.2%)

Note. No significant differences were found between CBS and WLC on any of the variables.

reason for the infertility. The majority of the women underwent medical treatment for their infertility problems, although in no instances had treatment been successful. The mean depression score (as measured by the HADS, see Measures), was 7.39 (see also Table 2).

Measures

Depressive symptoms

Depressive symptoms were measured by the Hospital Anxiety and Depression Scale (HADS; Spinhoven et al., 1997; Zigmond & Snaith, 1983), both at baseline and posttests. The seven items from the depression subscale have a four-point scale, ranging from 0 to 3. High scores on the depression subscale reflect increased levels of depression. The HADS is a self-report instrument with sufficient internal validity (Spinhoven et al., 1997) and has been proven to be sensitive to changes in response to psychotherapeutic intervention (Herrmann, 1997). In the present study, the alpha-reliability of the depression subscale was .80 at baseline, .75 at first posttest, and .79 at second posttest.

Table 2. Observed baseline and posttest depression scores (HADS) for participants in self-help CBS and WLC.

	Total ^a	CBS ^b	WLC ^c
Mean baseline depression score (SD)	7.39 (3.53)	7.61 (3.79)	7.23 (3.41)
Mean first posttest depression score (SD)	5.86 (2.91)	4.88 (2.32)	6.58 (3.13)
Mean second posttest depression score (SD)	6.00 (3.35)	4.64 (2.68)	6.73 (3.49)
Mean change score 1 (first posttest–baseline) (SD)	–1.64 (3.01)	–2.72 (2.87)	–.83 (2.91)
Mean change score 2 (second posttest–baseline) (SD)	–1.38 (3.62)	–3.00 (3.44)	–.50 (3.47)
Mean change score 3 (second posttest–first posttest) (SD)	.13 (2.60)	.14 (2.54)	.13 (2.69)

Notes: ^a*N* baseline/first posttest/second posttest = 44/42/40; ^b*N* baseline/first posttest/second posttest = 18/18/14; ^c*N* baseline/first posttest/second posttest = 26/24/26.

Demographic and definitive childlessness characteristics

Demographic information, time since child wish and definitive childlessness, and information about the physical cause of the infertility and medical treatment were measured by means of self-report.

Study conditions

CBS

The self-help program was based on techniques from cognitive behavioral therapy. The content of the program was developed after the completion of studies on predictors of psychological well-being for people who are definitively childless against their wish (Kraaij et al., 2009; Kraaij, Garnefski, & Vlietstra, 2008). The findings of these studies suggested that an intervention program for people with a permanent unfulfilled child wish should focus on the content of thoughts and bringing about effective cognitive change, combined with working on goal adjustment.

The self-help program consisted of a workbook, a work program, and a CD-rom. Participants were asked to work on the intervention 4 days a week (1 hour per day) for a period of 4 weeks. In the first week, participants were asked to do mindfulness-based relaxation exercises (provided on the CD-ROM) and to continue these exercises in the following three weeks. In the second week, participants learned to identify and change irrational cognitions (catastrophizing and all-or-nothing thinking) concerning their unfulfilled child wish. Examples of irrational cognitions were, “Without children my future looks horrible” and “My life is worthless now I can’t have children.” In the third week, participants practiced counter-conditioning: they learned to push away negative thoughts and feelings concerning their unfulfilled child wish with a positive feeling. Since the goal to have children is no longer achievable for this group, in the fourth week they were guided to formulate a new, realistic, and concrete goal. They also worked on improving their self-efficacy to reach this goal.

During the study, minimal coaching was offered, consisting of a weekly telephone contact focusing on motivation, progress, and questions. Coaches followed a protocol with questions like, “How are you progressing with the program?”

WLC

Participants on the waiting list did not receive the intervention during the study. They were offered the intervention (without minimal coaching) after completion of the study.

Statistical analyses

Baseline differences in demographic and childlessness characteristics, and also depressive symptom severity, between completers and dropout/excluded

respondents at posttests were evaluated with independent *t*-tests and chi-square tests.

Baseline group differences in demographic and childlessness characteristics, and depressive symptom severity, were examined with chi-square tests and one-way between-subjects ANOVAs to determine baseline equivalence of the study conditions.

To evaluate changes in the continuous outcome measure, 2×2 (group \times time) repeated measures ANCOVAs were performed with group as a between-groups factor and time as a within-subjects factor.

Results

Baseline equivalence

No differences in baseline depressive symptom severity (see Table 2 for depression scores) were observed between participants in CBS and WLC. Also, demographic and childlessness characteristics did not differ between the treatment group and the control group (Table 1).

Outcome

In Table 2, mean depression scores at baseline, first posttest, and second posttest are presented, for the total group, and for the CBS and WLC groups separately. In addition, mean change scores for depression over time are presented.

To evaluate the significance of changes in depression scores over time, three 2×2 (group \times time) repeated measures ANCOVAs were performed: from baseline to first posttest, from baseline to second posttest, and from first posttest to second posttest. Table 3 shows that the intervention significantly improved depression scores from baseline to first posttest and from baseline to second posttest, as reflected by the interaction effects for time by condition. No significant changes were found in depression scores from first posttest to second posttest.

Table 3. GLM with repeated measurements: multivariate effects for time and time \times condition on depression scores.

	Wilks's lambda	<i>F</i>	<i>df</i>	<i>p</i>	Partial eta squared
Time (baseline–first posttest)	.72	15.53	1,40	.00	.28
Time \times condition	.90	4.38	1,40	.04	.10
Time (baseline–second posttest)	.80	9.32	1,38	.00	.20
Time \times condition	.89	4.75	1,38	.04	.11
Time (first posttest–second posttest)	1.00	.09	1,36	.76	.00
Time \times condition	1.00	.00	1,36	.98	.00

Note. The means in the GLM may differ from the means in Table 2 due to listwise deletion.

Discussion and conclusion

The present study examined whether a new cognitive-behavioral self-help program (CBS) with minimal coaching was effective in improving depressed mood for women with a permanent unfulfilled child wish. Respondents who followed the CBS improved significantly on depression scores compared to the WLC. This positive effect remained after a follow-up period of one month. This is a promising finding, given the fact that, at present, many people from the target group do not obtain the psychological treatment they need, due to a lack of psychological programs. Because a self-help program can be delivered through regular mail or the Internet, more persons can be reached, while overcoming possible social and geographical barriers (Papworth, 2006).

The efficacy of psychological programs for people who are in infertility treatment has been shown by earlier studies, with the majority of these interventions employing CBT techniques (Boivin, 2003; Domar et al., 2000; Faramarzi et al., 2008; Sexton et al., 2010). Also, positive effects of CBT self-help programs on psychological problems have been shown for various patient groups (Gellatly et al., 2007). The present study adds to this knowledge that a self-help CBT program may also be beneficial to help people adjust to, and cope with, their definitive status of childlessness. This is in line with findings from other studies examining the effectiveness of self-help CBT programs for people with various acquired physical impairments or chronic diseases (Garnefski & Kraaij, 2011; Garnefski, Kraaij, & Schroevers, 2011; Kraaij et al., 2010).

Despite the encouraging results, this study had several limitations. First, the sample size is rather low. This limits the possibility of analyzing differential effects between subgroups of participants, and of evaluating longer-term effects. Studies with large sample sizes should be conducted. In the present study, only women were included as a first step. As a second step, the program should also be tested with a group of men who remain childless against their wish. In addition, it would be interesting to include both partners in future studies, as loss of a desired child is a problem that concerns couples. Furthermore, additional effort should be undertaken to retain respondents in the study. Even though minimal coaching was included in the present self-help program, dropout was still reasonably high. Possibly participants have motivational problems. Including motivational interviewing (Rollnick, Miller, & Butler, 2008), either by personal contact or by self-help module, at the start of the program might be a valuable addition to obtain lower dropout rates. Another limitation of the study design was that symptoms of depression were measured by self-report, which may have caused some bias. Future studies should also include other methods of measurements, such as structured interviewing or clinical diagnosis. In addition, future studies should also focus on other variables, such as quality of life, anxiety, personal growth, acceptance, and relationship satisfaction.

Furthermore, the present sample included all women who reported regular negative thoughts and feelings. This resulted in a group of women with mild to moderate levels of depressive symptoms. Future studies should also focus on people with higher depression scores. Finally, the present study gives no insight into which components of the present intervention worked. Future studies should study which components and techniques are effective in reducing depressive symptoms. The effect of other techniques should also be investigated (i.e., techniques from acceptance and commitment therapy to work on acceptance of the unfulfilled child wish).

In addition, it is important to realize that there is no one best treatment for every patient (Dusseldorp, Spinhoven, Bakker, van Dyck, & van Balkom, 2007). Self-help may not be equally suitable for all people with definitive childlessness. Some people may benefit more from individual face-to-face contact, whereas others may benefit more from group-based sessions or a self-help program. Future studies should focus on which individuals benefit from which type of treatment. Finally, advances in technology make it possible to develop different forms of delivering psychological interventions, such as by the Internet or smart phone. Future studies should explore various delivery modes and their efficacy.

In conclusion, the results of this study suggest that a CBT self-help program, focusing on relaxation, changing maladaptive cognitions, and the attainment of new personal life goals, might be an effective intervention in lowering depressive symptoms in women living with the loss of a desired child. Further studies are needed to focus on questions such as which persons benefit from self-help and how motivation to complete the program can be improved. For these purposes, larger groups, including men, should be studied.

Acknowledgments

This study is dedicated to Anne Vlietstra[†], who inspired us to start this line of research.

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