

EFFECT OF TRAINING ON BELIEFS ABOUT EXPOSURE THERAPY IN EXPERIENCED THERAPISTS

Jelle van Malsen¹, Anja Greeven², and Arnold van Emmerik^{3}*

¹ MA, Clinical Psychology Group, Faculty of Social and Behavioural Sciences, University of Amsterdam. Postal address: Nieuwe Achtergracht 129-B, 1018 WS Amsterdam, The Netherlands

² PhD, PsyQ. Postal address: Lijnbaan 4, 2512 VA The Hague, The Netherlands.

³ PhD, Clinical Psychology Group, Faculty of Social and Behavioural Sciences, University of Amsterdam. Postal address: Nieuwe Achtergracht 129-B, 1018 WS Amsterdam, The Netherlands

Abstract

Exposure therapy is an effective psychotherapeutic intervention for anxiety disorders, obsessive-compulsive disorder, and acute or posttraumatic stress disorder. Despite its effectiveness, exposure therapy is underutilized in situations in which it could be beneficial for patients. Negative beliefs about exposure therapy in therapists may partly explain this. This study therefore investigated the effect of a one-day training in exposure therapy on beliefs about exposure therapy in 81 experienced therapists with mostly cognitive behavioral orientations. In addition, anxiety sensitivity and intolerance of uncertainty were tested as predictors of this effect. Results showed that a one-day training had a significant moderate positive effect on therapist beliefs about exposure therapy. The magnitude of this effect was not predicted by anxiety sensitivity or intolerance of uncertainty in therapists. Further research is needed that includes control conditions and longer posttest intervals, investigates the effect of exposure training in therapists with different theoretical orientations, and examines if changes in beliefs about exposure therapy mediate the effect of exposure training on actual therapist behaviors.

Keywords: exposure therapy; behavior therapy; training; anxiety sensitivity; intolerance of uncertainty.

* Correspondence concerning this article should be addressed to Arnold van Emmerik, Faculty of Social and Behavioural Sciences, University of Amsterdam. Postal address: Nieuwe Achtergracht 129-B, 1018 WS Amsterdam, The Netherlands.
Email: a.a.p.vanemmerik@uva.nl

Introduction

Exposure therapy is an effective psychotherapeutic intervention in cognitive behavioral therapy for a wide range of disorders such as anxiety disorders, obsessive-compulsive disorder, and acute or posttraumatic stress disorder. Despite its effectiveness (e.g., Franklin et al., 2000; Powers & Emmelkamp, 2008; Reger et al., 2011) for different clinical populations (e.g., Lemmon & Mizes, 2002; Neuner et al., 2004; Ruf et al., 2010), studies suggest that exposure therapy is underutilized in patients that could benefit from it (Stobie et al., 2007). One reason for this is that despite the positive long-term effects for many patients, exposure therapy may have some negative consequences in the short-term (Meyer et al., 2014), most notably the fear that is elicited during the actual exposure procedures. Although fear is an indicator of successfully conducted exposure procedures (Reger et al., 2019), it is problematic for therapists who believe that psychological treatment should not elicit distress in a patient (Meyer et al., 2014). In addition, some therapists overestimate the risks of exposure therapy, including for example the risks of worsening the patient's problems, decompensation of the patient, or in PTSD, vicarious traumatization of the therapist (Deacon et al., 2013). Even limited endorsement of such negative beliefs is associated with less adequate delivery of exposure therapy and with more negative therapist opinions about exposure therapy (Deacon et al., 2013). Negative beliefs also seem to negatively impact the frequency in which therapists offer exposure therapy (Trivasse et al., 2020). The barrier that these beliefs pose to the competent delivery of exposure therapy seems to be partially modifiable however, in that negative beliefs about exposure therapy may become more positive through training or workshops (Deacon et al., 2013; Fang et al., 2019), which in turn promotes more frequent and more competent delivery of exposure therapy to patients (Farrell et al., 2016). This underscores the need for studies of how beliefs about exposure therapy can be improved in different therapist samples and of individual therapist characteristics that predict such improvements.

Interestingly, research also suggests room for improvement in experienced therapists with -presumably- already quite positive beliefs about exposure therapy, such as cognitive behavioral therapists. For example, while interoceptive exposure to bodily sensations has added value in panic symptom reduction in the long term (Boettcher et al., 2016), cognitive behavioral therapists offered it to only slightly more than half of their panic disorder patients (Sars & Van Minnen, 2015). Improving these therapists' beliefs about exposure therapy may help to improve this situation (Trivasse et al., 2020).

Beliefs about exposure therapy may be associated with individual characteristics of the therapists, such as anxiety sensitivity or the fear of sensations of panic or dread (McNally, 2002), and intolerance of uncertainty or a person's attitudes towards uncertainty and its implications (Carleton et al., 2012). Individuals

who are sensitive to anxiety react fearfully to sensations of panic or dread, thereby further increasing their anxiety (Vujanovic et al., 2007). This may become a motive to avoid situations in which anxious feelings could arise. It follows that those therapists with higher levels of anxiety sensitivity may be more likely to avoid exposure therapy because of the high levels of anxiety that successful exposure elicits in patients. In such therapists, the perceived risks of exposure therapy (such as decompensation, vicarious traumatization, and lawsuits; Deacon et al., 2013) could also generate stress. Previous studies showed conflicting results regarding the relationship between anxiety sensitivity and therapist beliefs about exposure therapy (Fang et al., 2019; Deacon et al., 2013). Higher anxiety sensitivity predicted less competence and greater reluctance in the delivery of exposure therapy (Harned et al., 2013; Meyer et al., 2014). While Fang et al. (2019) found no association between anxiety sensitivity and therapist beliefs, Deacon et al. (2013) did find a positive association between therapist beliefs and the physical component of anxiety sensitivity. Given these inconclusive findings, additional research on the relationship between anxiety sensitivity and therapist beliefs about exposure therapy is warranted. Intolerance of uncertainty in therapists may have a similar effect on the delivery of exposure therapy because despite the large amount of evidence, the success of exposure therapy in a specific patient can never be guaranteed. As expected, research found that intolerance of uncertainty was associated with concerns about the use of elements from cognitive behavioral therapy (Turner et al., 2014) and with less frequent use of exposure techniques by younger clinicians (Levita et al., 2016).

In sum, the first aim of the current study was therefore to further determine how Dutch cognitive behavioral therapists think about exposure. Second, we examined the effect of a one-day training in exposure therapy on these beliefs in our relatively experienced therapist sample. Third, we attempted to identify individual therapist characteristics that could predict this effect of training in exposure therapy, as this may tell us something about which therapists benefit most from direct training in exposure therapy, versus therapists that may benefit more from other approaches.

Methods

Participants

Participants ($N=81$) were attendees of a one-day online training in exposure therapy (see Procedure). Every attendee of the training was invited to participate in the present study. The participants' mean age was 48.44 years ($SD=12.07$). Participants reported an average of 19.18 years of experience as a mental healthcare professional ($SD=11.61$, range=0–44 years). Most participants were female (65; 80.2%). Of the 81 participants, 72 (88.9%) reported having a cognitive behavioral

orientation. Other therapeutic orientations included eclectic (1; 1.2%), experiential (1; 1.2%), EMDR and schema therapy (2; 2.5%), or a mix of orientations in addition to a cognitive behavioral orientation (5; 6.2%). Most participants (61; 75.3%) were members of the Dutch Association for Behavioural and Cognitive Therapies. Two of those participants were also members of the Dutch Psychoanalytic Institute and the Association for Person-Oriented Experiential Psychotherapy, and the other 20 participants (24.7%) reported no membership of any psychotherapy association. Sixty-six therapists primarily treated (young) adults (81.5%), 11 therapists mostly treated children (13.6%), and 4 therapists mostly treated elderly patients (4.9%). At least 85.2% of the participants had conducted some form of exposure in the 12 months prior to the training (further details on participants' clinical expertise, work setting, professional education, and experience with exposure are available upon request).

Measures

Therapist beliefs. The Therapist Beliefs about Exposure Scale (TBES; Deacon et al., 2013; Dutch translation by Van Emmerik & Greeven, 2020) is a 21 item self-report questionnaire assessing therapist beliefs about exposure therapy. Questions are answered on a five-point Likert scale, ranging from 'Strongly disagree' (0) to 'Strongly agree' (4), and have the form of statements such as "It is unethical for therapists to purposely evoke distress in their clients". The total scores on the TBES range from 0 to 84. Lower scores indicate more positive beliefs about exposure therapy. The TBES showed excellent internal consistency ($\alpha = .95$), good 6-month test-retest reliability ($r = .89$), and good construct validity (Deacon et al., 2013). In the current study, the TBES had good internal consistency ($\alpha = .88$) at pretest.

Anxiety sensitivity. The Anxiety Sensitivity Index (ASI; Reiss et al., 1986; Dutch translation by Vujanovic et al., 2007) is a sixteen item self-report questionnaire assessing anxiety sensitivity. Questions are answered on a five-point Likert scale, ranging from 'Strongly disagree' (1) to 'Strongly agree' (5). An example item is "When I am nervous, I worry that I might be mentally ill". The total scores on the ASI range from 16 to 80. Higher scores indicate more anxiety sensitivity. The ASI has been found to be a valid and reliable measure of anxiety sensitivity, with good internal consistency ($\alpha = .83$), convergent validity, discriminant validity, and incremental validity (Vujanovic et al., 2007). The internal consistency in the current study was good ($\alpha = .83$).

Intolerance of uncertainty. The Intolerance of Uncertainty Scale-Shortened (IUSS; Carleton et al., 2007; Dutch translation by Helsen et al., 2013) is a twelve item self-report questionnaire assessing intolerance of uncertainty. It has two subscales for 'Prospective anxiety' (seven items) and 'Inhibitory anxiety' (five items). Questions are answered on a five-point Likert scale, with answers ranging

from ‘Strongly disagree’ (1) to ‘Strongly agree’ (5). An example of an item of the Prospective anxiety subscale is “It frustrates me not having all the information I need”. The Inhibitory anxiety subscale includes items such as “When I am uncertain, I can’t function very well”. The total scores on the IUSS range from 12 to 60. Higher scores indicate more intolerance of uncertainty. The IUSS showed good construct validity and internal consistency ($\alpha = .85$; Helsen et al., 2013). The internal consistency in the present study was good ($\alpha = .85$).

Procedure

The study was approved by the Ethics Review Board of the Faculty of Social and Behavioural Sciences of the University of Amsterdam. Informed consent was obtained from all participants. Participants could sign up for a one-day online (due to COVID-19) training in exposure therapy on November 28th, 2020, via the website of the Dutch Association for Behavioural and Cognitive Therapies. Before (pretest) and after (posttest) the training, participants were asked to fill out online surveys using Qualtrics. In the pretest survey, sent to participants on November 26th, 2020, participants provided demographic and professional characteristics and completed the TBES, IUSS, and ASI.

The training lasted six hours and started with a 45-minute plenary lecture on the history, outcome research, working mechanisms, indications, and contra-indications of various forms of exposure therapy. This was followed by two rounds of 1,5-hour training sessions on specific forms of exposure by specialists in each form. Participants followed one training session in each round. The first round included training sessions on exposure in vivo, imaginary exposure, and interoceptive exposure. The second round included training sessions on virtual reality exposure therapy, writing therapy, narrative exposure therapy, and cue exposure. Finally, the training was concluded with a plenary lecture on future developments in exposure therapy. The fee for the total training was €160 for members of the Dutch Association for Behavioural and Cognitive Therapies and €210 for non-members. Attendees received education credits and a handbook on exposure therapy (Greeven & Van Emmerik, 2020).

The posttest survey only included the TBES and was sent to the participants immediately after the training, followed by an automatic reminder eleven days later.

Data analysis

Outliers in ASI, IUSS, and TBES scores were defined as 1.5 times the quartile distance under Q1 or over Q3 of the box plot and three such observations were replaced by the most extreme non-outlier value (the Winsorizing method; Field, 2009). Within-group change in TBES scores was tested using a two-tailed paired samples t-test and a Cohen’s d_z effect size for paired samples was calculated (Lakens, 2013). In addition, the percentage of participants who showed positive change, no

change, or negative change in TBES scores after the training was calculated after subtracting participants' pretest TBES scores from their posttest TBES scores. Associations of ASI and IUSS scores to TBES difference scores were tested using simple regression analyses. Assumptions of linearity and homoscedasticity were checked using scatterplots. Analyses were based on the intent-to-treat sample (after carrying forward the initial TBES scores of 12 participants) and differences in the pattern of findings for the completer sample ($n=69$) will be reported.

Results

Descriptive statistics of TBES, ASI, and IUSS scores can be found in Table 1. The assumption of normality was not violated for either variable (all *Shapiro-Wilk*(81) $>.97$, all $p>.060$). The mean posttest TBES score was significantly lower than the mean pretest total TBES score with a medium effect size ($t(80)=4.56$, $p<.001$, $d_z=0.51$), indicating increased positive beliefs about exposure after the training. A total of 51 participants (63.0%) had lower TBES scores after the training than before the training, 16 participants (19.8%) showed no change in TBES scores, and 14 participants (17.3%) had higher TBES scores after the training than before the training.

Table 1. Descriptive Statistics of the TBES, ASI, and IUSS Scores

Measure	Range	<i>M</i>	<i>SD</i>
TBES (pretest)	0-44	20.96	9.66
TBES (posttest)	0-41	17.31	9.76
ASI	16-38	22.34	4.81
IUSS	12-42	24.91	6.06

Note. TBES=Therapist Beliefs and Attitudes Scale; ASI=Anxiety Sensitivity Inventory; IUSS=Intolerance of Uncertainty Scale-Shortened.

Two simple regression analyses were conducted to test whether ASI scores or IUS scores predicted change in TBES scores between pretest and posttest. The assumption of linearity was not violated for the relationships of both the ASI scores and IUS scores to the TBES change scores. The assumption of homoscedasticity was also not violated for both the ASI scores and IUS scores. The model including the ASI scores did not significantly predict TBES difference scores (adjusted $R^2=.02$; $F(1,78)=2.17$, $p=.145$). The same applied for the model including the IUSS scores (adjusted $R^2=-.01$, $F(1,79)=.15$, $p=.703$).

Repeating the analyses in the completer sample ($n=69$) did not change the pattern of the results (details are available upon request).

Discussion

The current study examined changes in therapist beliefs about exposure therapy after a one-day training in exposure, and whether anxiety sensitivity and intolerance of uncertainty in therapists predicted these changes. Although the sample predominantly consisted of experienced cognitive behavioral therapists, beliefs about exposure still showed significant and considerable improvement after the training, regardless of participants' levels of anxiety sensitivity and intolerance of uncertainty.

These results are, for the most part, in line with previous research. Changes in therapist beliefs about exposure were previously observed in Chinese (Fang et al., 2019) and American (Deacon et al., 2013; Farrell et al., 2016) samples of therapists from different psychotherapeutic backgrounds. Differences in the composition of the therapist samples may explain the fact that our effect, while statistically significant, was considerably smaller ($d_z=.51$) than the effects found by Deacon et al. (2013) ($d=1.50$) and Fang et al. (2019) ($d=1.07$). Our sample of mainly cognitive behavioral therapists had lower TBES scores at pretest ($M=20.96$) than the Deacon et al. (2013; $M=33.10$) and Fang et al. (2019; $M=42.79$) studies and there may simply have been less room for further improvement. Of note, cognitive behavioral therapy, of which exposure therapy is a central component, is less well accepted in China (Fang et al., 2019) and only 65.0% of Deacon et al. (2013) sample reported having a behavioral therapeutic orientation (compared to 88.9% of our sample). Another explanation of our moderate effect size may be the online format of the exposure training, that limited the possibilities for the interaction, role playing, and practice that characterize face-to-face clinical training. An unexpected finding of the current study is that 17.3% of the participants reported more negative beliefs about exposure therapy after the training. This underscores the importance of further research into the predictors and mechanisms of training effects.

Several limitations should be considered in the interpretation of our findings. First, given the fee of the training for participants, our sample may have been biased towards therapists that are older and better paid (and thus more experienced) or more eager to learn. Second, it is unclear to what degree the observed change in beliefs translates to changes in the way exposure therapy is conducted. The relevance of that question is underscored by Deacon et al. (2013), who observed that higher TBES scores were associated with less competent delivery of exposure. Third, the design of our study did not include a control condition or long-term posttest. Given these limitations, we recommend that future studies replicate and extend our findings in several ways. First, controlled studies are needed that include long-term posttests that also assess if changes in beliefs about exposure mediate the effect of exposure training on actual therapist behaviors. Second, studies are needed of therapist samples with different demographic and professional characteristics, such as less

experienced therapists with different psychotherapeutic orientations. Third, we need to examine predictors and mechanisms of negative effects of training on therapist beliefs about exposure, to prevent the backfiring of training efforts on therapist and - ultimately - their patients.

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