

Therapists' Beliefs Relating to Exposure: German Adaptation of the Therapist Beliefs about Exposure Scale

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Keywords

Exposure therapy · Anxiety disorders · Agoraphobia with panic disorder · Therapist Beliefs about Exposure Scale

Summary

Background: Although exposure therapy is a very effective way of treating anxiety disorders, rather low frequencies of delivering exposure haven been reported in studies. Negative beliefs about exposure may hamper a successful dissemination. **Subjects and Methods:** The Therapist Beliefs about Exposure Scale was translated into German (TBES-G) in order to enable the exploration of these beliefs. The psychometric properties were determined based on a large sample of behavior therapists (N = 209; n = 105 of them were licensed and n = 104 still in academic training). **Results:** The TBES-G showed a 2-factor structure as well as a good internal consistency for the whole scale ($\alpha = 0.87$) and the two subscales ($\alpha = 0.80$). Evidence of a convergent validity for panic disorder and agoraphobia was found in a subsample (n = 184). Negative beliefs about exposure therapy were positively associated with the reporting of obstacles to utilizing this treatment and negatively associated with the amount of types of exposure. **Conclusions:** The present findings suggest the TBES-G to be a reliable and valid instrument to identify therapists' beliefs about exposure. Future research should determine the test-retest reliability and focus on whether negative beliefs impede a wider application of exposure therapy.

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Schlüsselwörter

Expositionstherapie · Angststörungen · Agoraphobie mit Panikstörung · Fragebogen zu Überzeugungen von Therapeuten bezüglich Exposition

Zusammenfassung

Hintergrund: Die Expositionstherapie gilt als wirksame Methode zur Behandlung von Angststörungen, jedoch werden in der Literatur nur geringe Anwendungshäufigkeiten berichtet. Negative Überzeugungen von Therapeuten hinsichtlich Exposition können ein Grund hierfür sein. **Probanden und Methoden:** Um die Erforschung von diesen Überzeugungen auch im deutschsprachigen Raum zu ermöglichen, wurde die Therapist Beliefs about Exposure Scale ins Deutsche übersetzt (TBES-G). Anhand einer Stichprobe von Verhaltenstherapeuten (N = 209; davon n = 105 bereits approbiert und n = 104 in Ausbildung) wurden die psychometrischen Eigenschaften ermittelt. **Ergebnisse:** Die TBES-G zeigte eine 2-Faktoren-Struktur und eine gute interne Konsistenz sowohl für die Gesamtskala ($\alpha = 0,87$) als auch für die beiden Subskalen ($\alpha = 0,80$). In einer Substichprobe (n = 184) fanden sich Hinweise auf eine konvergente Validität bei Panikstörung und Agoraphobie. Negative Überzeugungen bezüglich der Expositionstherapie waren positiv korreliert mit der Angabe von Hinderungsgründen für die Anwendung und negativ korreliert mit der Anzahl der eingesetzten Durchführungsmodalitäten von Exposition. **Schlussfolgerungen:** Die Ergebnisse deuten auf ein reliables und valides Messinstrument zur Erfassung von Überzeugungen bei Therapeuten bezüglich Exposition hin. Als nächster Schritt wäre es wichtig, sowohl die Stabilität der Skala als auch die Frage zu erforschen, inwieweit negative Überzeugungen die Durchführung von Expositionstherapien verhindern.

Introduction

Exposure therapy has proven in many studies to be a very effective method for treatment of anxiety disorders [e.g., Abramowitz, 2013]. Hand [2015] reported improved symptoms in 65–90% of anxiety patients treated with exposure. There is a great deal of evidence that exposure therapy is very effective for certain specific anxiety disorders. For example, good results were obtained in randomized controlled trials with patients with generalized anxiety disorder [e.g., Hoyer et al., 2009] and specific phobia [e.g., Öst et al., 2001], as well as with obsessive-compulsive disorder [e.g., Foa et al., 2005]. Meta-analyses have shown the effectiveness of exposure therapy for ‘post-traumatic stress disorder’ (PTSD) [e.g., DiMauro, 2014], ‘social phobia’ [e.g., Ruhmland and Margraf, 2001a], and ‘panic disorder and agoraphobia’ [e.g., Ruhmland and Margraf, 2001b]. The findings were included in the ‘S3-Leitlinie Angststörungen’ (Guideline on Anxiety Disorders) [Bandelow et al., 2015], in which exposure is explicitly mentioned as an effective treatment element.

Despite the verified high effectiveness of exposure methods, there is evidence that effective therapeutic treatment methods are not used frequently enough for patients with an anxiety disorder. Bandelow et al. [1995] showed, based on a retrospective survey, that only 20% of patients with panic disorder and agoraphobia were given behavioral therapy / cognitive therapy. In a representative population survey in Germany, behavioral therapy was used for only 1% of all treated cases of anxiety syndromes [Margraf and Poldrack, 2000]. Roth et al. [2004], in a therapist survey (specialization: behavioral therapy) about the frequency of use of confrontation methods in patients with anxiety and obsessive-compulsive disorders, found that it was ‘always’ used by only 26.8% of the therapists and ‘most of the time’ by 37%. Most therapists conducted their exposure sessions in their own treatment rooms. Only 21% usually left their office for this purpose. A retrospective analysis of patient treatments in a German university outpatient clinic found that for agoraphobia treatment, just a little more than half of the cases (58.7%) were conducted adequately with therapist-guided exposure in vivo, and for almost half of the cases (48.9%) exposure in vivo was given as a homework assignment [Klan and Hiller, 2014]. The frequency of use of interoceptive exposure (IE) for treatment of panic was even lower in this study, with a total of 36% therapist-guided IE and 12% programmed self-administered IE. Especially at a university outpatient clinic, one would expect that therapists would follow the latest scientific findings and use exposure more consistently. An American study of the frequency of use of psychotherapeutic techniques for anxiety disorders found that the majority of patients diagnosed with ‘panic disorder’ were treated by exposure in sensu (63.9%) and 19.4% by IE, while 58.3% of patients performed self-directed exposure in vivo [Hipol and Deacon, 2013].

Low rates of exposure were also found for other anxiety disorders, such as PTSD. Thus, 83.1% of the psychologists surveyed in a study by Becker et al. [2004] reported that they had never used IE to treat a patient diagnosed with PTSD. Furthermore, few respond-

ents in this study said that they had been trained in exposure methods for treatment of PTSD (28.5% were trained in IE, 27.1% in exposure in vivo). Even lower rates of use were reported in the treatment of obsessive-compulsive disorder [Böhm et al., 2008].

Apart from the evidence of too low *frequency of use* of exposure in clinical practice, the *quality* of the exposure carried out in practice is still largely unclear. Assertions about this are made more difficult because exposure is a complex process, with many parameters and thus many possible variations. The procedures described in textbooks by well-known authors could be considered an important guide. For example, Hand [2015] described exposure with response management as a favored method. Linden [2015] looked at the difference between the ‘reaction exposure’ indicated for panic disorder and agoraphobia (which involves confrontation with physical, emotional, and cognitive anxiety responses), and the contraindicated ‘stimulus exposure’ (e.g., exposure to as many anxiety-provoking places as possible, ‘as in a test of courage’ (p 458)). Nevertheless, there are still some questions to be answered about the use of exposure, such as the type of guidance (therapist-guided vs. programmed self-exposure). There is evidence to suggest that a combination of therapist-guided exposure in vivo and programmed self-exposure in vivo for panic disorder and agoraphobia tends to be more effective than programmed self-exposure in vivo alone (i.e., as homework) [Klan et al., 2016; Lang et al., 2012]. Hand [2015] pointed out in his contribution to the above-mentioned textbook, that the useful scope of therapist guidance for exposure in vivo depends on several factors (intensity of the disorder, comorbidity, etc.) and both ‘overprotective’ and ‘underdosed’ therapist guidance (p 125) can be problematic. Further questions on the use of exposure are related to the stimulus type (in sensu, in vivo, interoceptive, virtual reality), the setting (individual vs. group therapy), the intensity and frequency of the procedure (graduated vs. non-graduated; expanding-spaced vs. massed, as well as the duration and scale of the exposure exercises. Several methods could be derived from the model of inhibitory learning as an explanatory approach for the mechanisms of action of exposure therapy, thereby contributing to optimization of treatment effects [Craske et al., 2014; Craske, 2015]. The following strategies are among those that have been described: enhanced extinction, removal of safety signals, variability of stimuli, and exposure in multiple contexts [Pittig et al., 2015]. It is still largely unclear at present to what extent these strategies are known or used in patient care.

A few studies suggest that therapists’ negative beliefs about exposure therapy lead to lower frequency of use of this intervention for anxiety disorders [e.g., Meyer et al., 2014]. The attitudes of practicing therapists toward exposure therapy are likely to be very diverse, depending on the disorder being treated, and the method is sometimes rejected despite its proven effectiveness. Some authors describe negative attitudes and the dissemination of ‘myths’ among therapists about the exposure method [e.g., Feeny et al., 2003]. Negative beliefs include concerns about worsening of symptoms and higher dropout rates [Becker et al., 2004; Reid et al., 2017]. Sometimes exposure therapy is seen as stressful and unethical, since the patient is exposed to the risk of harm [Deacon and

Farrell, 2013]. Especially in the use of exposure for PTSD, the idea has been discussed as a myth, that this approach is rigid and insensitive and that the treatment effects found in randomized controlled trials cannot be transferred to routine clinical practice [Feeny et al., 2003]. Some therapists believe that the method cannot be individually tailored to the patient's needs [Farrell et al., 2013]. However, these concerns pertain not only to the patients, but also to the therapists themselves. Possible secondary trauma from patients' narratives, inappropriate dual relationships during exposure outside the treatment room, and the possibility of a malpractice suit in the event of decompensation by the patient are common fears [Deacon and Farrell, 2013; Storch and McKay, 2013]. Other factors mentioned as affecting the use of exposure include increased anxiety sensitivity among therapists [Meyer et al., 2014] and their training in this treatment method. Thus, Becker et al. [2004] found that psychologists trained in exposure therapy also use IE more frequently for patients with PTSD. Scherr et al. [2015] ascertained that therapists who themselves show greater experiential avoidance tend to allocate less time for exposure for (fictional) patients with obsessive-compulsive disorder. Reid et al. [2017] identified lack of training as an obstacle to exposure therapy for children and adolescents with anxiety disorders. More comprehensive training can both reduce existing concerns about exposure therapy and lead to more frequent use [Farrell et al., 2016].

There is also evidence that negative beliefs lead to suboptimal use of the method. In the study by Farrell et al. [2013], therapists with an experimentally induced negative belief chose a more cautious type of exposure, i.e., they sought a less anxiety-provoking stimulus and tended to try to minimize the patient's anxiety (e.g., with breathing techniques).

It is important to recognize the obstacles, in order to counteract them if necessary, so that more effective treatment can be administered in the future to anxious patients. Stork and McKay [2013] argued for exploration of the relationship between therapists' beliefs about exposure therapy and the type of treatment they provide. Deacon et al. [2013] have made an important contribution to this question by developing a scale that reliably and validly measures therapists' negative beliefs about exposure, on the basis of 21 items. The Therapist Beliefs about Exposure Scale (TBES) has an excellent overall reliability ($\alpha = 0.95$) and a 6-month test-retest reliability of $r = 0.89$. The beliefs are scored on a 5-point Likert scale that ranges from 0 = 'Disagree strongly' to 4 = 'Agree strongly'. The sample was $N = 637$ participants, normally distributed ($z(637) = 1.03$, $p = 0.24$), and scattered with a standard deviation (SD) of 17.5 to the mean $M = 34.0$. The lowest possible score is 0, and the highest is 84. Higher values signify more negative beliefs. Factor analysis determined a 1-factor structure. Lower values of the TBES total score correlated significantly with younger age, male gender, Ph.D.-level education, affiliation with clinical psychology, and self-reported status as an anxiety specialist [Deacon et al., 2013].

The goal of the present study is to develop a German version of the TBES (TBES-G), so that this instrument can also be used in research in German-speaking countries. An ineffective therapy causes unnecessary costs for the health system. It is important to ex-

plore the reasons that empirically effective types of treatment are not being performed, so that more patients will receive effective treatment in the future. We conducted a survey as part of this study, to determine the psychometric properties of the TBES-G and to obtain preliminary indications of its construct validity.

Method

Study Planning and Procedure

The survey was conducted online by the Psychological Institute of the University of Mainz, using the 'Sosci Survey' program [Leiner, 2014]. The link to the questionnaire package was sent to all cognitive-behavioral therapy training institutes in Germany known to the authors ($N = 110$), with the request that it be forwarded to therapists working there (trainees and licensed therapists). Participants had to either be trained psychological therapists with a specialist qualification in behavioral therapy or be in training as a psychological therapist in behavioral therapy. The survey was combined with an additional study of the obstacles to the use of exposure in vivo and IE for panic disorder and agoraphobia. Another inclusion criterion was that the therapists had to have treated at least 1 patient with 'panic disorder with agoraphobia' (DSM-IV: 300.21; ICD-10: F40.01), 'panic disorder without agoraphobia' (DSM-IV: 300.01; ICD-10: F41.0), or 'agoraphobia without a history of panic disorder' (DSM-IV: 300.22; ICD-10: F40.00). The survey ran from August 18, 2016 to October 13, 2016 and was available at www.socisurvey.de/expo/ (as of August 18, 2016).

Translation of the Questionnaire

The TBES [Deacon et al., 2013] was translated from English to German and then back-translated into English by a professional translator (a bilingual native speaker, specializing in psychology). Modifications were made to the German version on the basis of this back-translation. The English version of the questionnaire consists of a total of 21 items and a 5-point response scale, with options 'Disagree strongly' (= 0), 'Disagree' (= 1), 'Unsure' (= 2), 'Agree' (= 3), and 'Agree strongly' (= 4). Higher scores signify a negative attitude to exposure as a treatment. The German version also contains 21 items (see Online Supplemental Material; www.karger.com/?DOI=479890). Higher scores here also signify a negative attitude to exposure as a treatment.

Measuring Instruments and Structure of the Online Questionnaire

The 3-part survey was approved by the Ethics Committee of the Psychological Institute of the University of Mainz (Proposal 2016-JGU-psychEK-013). In the first part, a short explanation was given about the objective (text: 'Dear Participant, we are currently conducting a scientific research project at the Johannes Gutenberg University of Mainz on the topic: use of exposure methods for patients with panic disorder and agoraphobia. With this research project, we would like to investigate how consistently exposure is used as a treatment for panic disorder and agoraphobia, and why, in some cases, this method is avoided. We are also interested in your personal opinion about exposure as a method of treatment.'). The inclusion criteria were also explained. We then asked about socio-demographic (age, gender, relationship status) and professional variables (license, therapeutic approach, training in adult or child and adolescent psychotherapy, subject at university, number of outpatient psychotherapy sessions completed up to the present, and number of patients treated who displayed 1 out of the 3 above-mentioned disorders). The second part was completion of the TBES-G; the instructions stated: 'Below are some statements about exposure as a method of treatment for anxiety disorders. Please check off how strongly you agree with the statements.' In the third part, we asked specifically about obstacles to the use of exposure in a previously conducted treatment. Here, the participants were asked to refer to their most recent outpatient treatment of a patient with 1 of the 3 symptom profiles 'panic disorder with agoraphobia', 'panic disorder without agoraphobia', or 'agoraphobia without a history of panic disorder' as the main diagnosis, and to answer the questions of whether a therapeutic rationale was conveyed to the patient and which of the 4

Table 1. Demographic and therapist variables of the survey participants

Variables	Sample (N = 209)	
	n	%
Female	171	81.8
Age in years, M (SD; range)	34.88 (7.56; 25–70)	
Stable partnership (yes)	185	88.5
License (yes)	105	50.2
Therapeutic approach		
Only CBT	207	98.6
CBT and other methods	2	1.0
Field ^a		
Adult psychotherapy	196	93.8
Child and adolescent psychotherapy	26	12.4
Subject ^a		
Psychology	200	95.7
Medicine	3	1.4
Pedagogy	5	2.4
Social pedagogy	2	1.0
Teaching	2	1.0
Political and social sciences	1	0.5
Outpatient psychotherapy sessions conducted, M (SD; range) ^b	1,571.41 (3,654.80; 12–40,000)	
Number of patients treated with ^c		
Agoraphobia without a history of panic disorder, M (SD; range)	2.83 (8.80; 0–70)	
Panic disorder without agoraphobia, M (SD; range)	4.12 (8.67; 0–50)	
Panic disorder with agoraphobia, M (SD; range)	8.26 (24.48; 0–250)	
Average time to respond to the survey, min, M (SD; range) ^d	8.46 (2.218; 3.97–13.93)	

^aMultiple answers possible.
^bN = 200.
^cN = 208.
^dN = 184.
M = mean; SD = standard deviation; CBT = cognitive-behavioral therapy.

possible types of exposure were used. The possible means of delivering exposure were: (i) therapist-guided IE, (ii) programmed self-administered IE, (iii) therapist-guided exposure in vivo, and (iv) programmed self-exposure in vivo. The number of possible types of exposure could therefore be between 0 (no types of exposure used) and 4 (all 4 types of exposure used). If one of the types of exposure itemized in the questionnaire was not used, the participants were asked to evaluate on a 5-point scale, for each that was *not* used, to what extent each of 16 obstacles was relevant. Potential obstacles were, for example, ‘Treatment of another illness (a comorbid disorder) suffered by the patient was more important’, ‘My concern that the patient will terminate the exposure’, or ‘The therapeutic alliance could be damaged’. A complete list of the 16 obstacles can be found in the Online Supplemental Material (www.karger.com/?DOI=479890). There were 5 levels to the scale for assessment of the obstacles: from 0 (There was no obstacle to the use of exposure) to 4 (There was a very strong obstacle to the use of exposure). The list of obstacles was generated by the authors’ brainstorming as well as a preliminary survey of trainees at the Outpatient Clinic of the University of Mainz. If a type of exposure was used, participants were asked about the frequency of its performance.

Sample

The sample is shown in table 1. One subject was excluded because that person’s answers on the frequency of previous treatment of patients with anxiety disorders did not seem plausible.

Statistical Analyses

The data were analyzed by means of IBM SPSS (Statistical Package for the Social Sciences, Version 22). First, descriptive statistics were calculated for the individual items (mean, complexity, variance, and discriminative power). To test the suitability of the data for a factor analysis, we calculated the Kaiser-

Meyer-Olkin (KMO) criterion and the Bartlett Test of Sphericity. For factor extraction, we chose a principal component analysis with promax rotation, since a correlation of the factors with each other was to be expected. To determine the number of factors, we constructed a scree plot with Horn’s parallel analysis [Horn, 1965]. Cronbach’s α was used to determine overall reliability. Then, as a first indication of construct validity, we checked whether there was a correlation of the sum score of the TBES-G with the number of types of exposure used (0–4). In addition, the relationship of the TBES-G sum score to the sum of all the obstacles was determined. For this purpose, the scale values of the 16 obstacles were added up and combined to form a sum score. The differences among the different subgroups in the sum score of the TBES-G were identified by t-tests and 1-factorial analyses of variance (ANOVAs). Then, the relationship of the TBES-G sum score to the therapist variables recorded in the first part was checked by means of Pearson correlations.

Results

Parametric Values of the TBES-G

The mean sum score was $M = 18.55$ ($SD = 10.47$, range 0–68), and the mean item score was $M = 0.88$ ($SD = 0.40$, range 0.14–1.62). Overall, the questionnaire showed a mean discriminative power of $M = 0.47$ (range 0.28–0.60). The average complexity of the items was $M = 0.22$ (range 0.04–0.41). The mean inter-item correlation was $M = 0.28$ (range 0.04–0.65). On average, the variance was $M = 0.83$ (range 0.22–1.71). Table 2 shows the parametric values for the individual items.

Table 2. Means, complexities, variances, and discriminative power of the individual items

Item	Mean	Complexity	Variance	Discriminative power
1	1.62	0.405	1.29	0.432
2	1.32	0.330	1.12	0.428
3	1.46	0.365	1.14	0.415
4	1.03	0.258	1.00	0.435
5	0.56	0.140	0.70	0.501
6	0.44	0.110	0.42	0.560
7	0.34	0.085	0.45	0.439
8	1.40	0.350	1.13	0.451
9	0.73	0.183	0.92	0.275
10	1.22	0.305	1.27	0.555
11	1.29	0.323	1.13	0.466
12	1.27	0.318	1.71	0.460
13	0.57	0.143	0.55	0.594
14	0.86	0.215	0.72	0.518
15	0.37	0.093	0.29	0.533
16	0.87	0.218	0.89	0.408
17	0.85	0.213	0.76	0.562
18	0.61	0.153	0.48	0.407
19	0.14	0.035	0.22	0.465
20	0.69	0.173	0.49	0.495
21	0.89	0.223	0.79	0.545

Factor Analysis

Examination of the data showed its suitability for a factor analysis; the KMO measure was 0.870, and the Bartlett Test of Sphericity was significant ($\chi^2 = 1397.747$, $df = 210$, $p < 0.001$). Although the original questionnaire had a 1-factor structure, the present sample suggests a multidimensional structure: A principal components analysis was performed. The first 5 eigenvalues were 6.32, 1.91, 1.31, 1.18, and 1.09. To ascertain the exact number of factors, we constructed a screeplot with Horn's parallel analysis [Horn, 1965], which gave a 2-factor solution. Judging from the pattern matrix, the items also divide well in terms of content into 2 factors, with the exception of items 3 and 7, which are discussed below. The 2 factors (by content) were titled 'Concerns about rejection by the patient' and 'Concern about side effects'. Such items as 'The majority of patients experience exposure therapy as unacceptably aversive', 'The majority of patients refuse to participate in exposure treatment', or 'Exposure therapy makes it difficult to meet the needs of the individual patient' were assigned to the factor 'Concerns about rejection by the patient'. The items 'With highly anxiety-provoking exposure treatment, patients may also be physically harmed by the anxiety (e.g., loss of consciousness)' and 'Triggering severe anxiety as part of the exposure therapy poses a risk of patients decompensating (losing mental and/or behavioral control)' were assigned to the factor 'Concern about side effects'. Overall, the first factor explained an additional 30.11% and the second factor an additional 9.11% of the variance, for a total of 39.2% of the variance. The promax rotation was chosen as a rotation method because it was assumed that the 2 factors are not independent of one another. The 2 factors were correlated by $r = 0.483$. Items 1, 4,

Table 3. Promax rotation

Item	Loading on factor 1	Loading on factor 2	Communality
1	0.338		0.241
2		0.360	0.235
3		0.300	0.221
4	0.504		0.297
5		0.461	0.343
6	0.759		0.577
7	0.311	0.277	0.257
8		0.775	0.491
9	0.421		0.169
10		0.650	0.459
11		0.492	0.319
12		0.500	0.303
13	0.523	0.276	0.489
14	0.796		0.572
15	0.423	0.291	0.382
16		0.744	0.451
17		0.820	0.597
18	0.444		0.265
19	0.783		0.531
20	0.835		0.593
21		0.578	0.441

Factor loadings < 0.25 are not shown.

6, 9, 13–15, and 18–20 were assigned to the first factor, and items 2, 5, 8, 10–12, 16, 17, and 21 to the second factor. Item 3 (Exposure therapy works poorly with complex cases (e.g., if a patient has multiple diagnoses)) and item 7 (Exposure is associated with a less close therapeutic relationship than other methods of psychotherapy) was not clearly attributable to a factor. Item 3 loaded a little higher on factor 2 ($a^2 = 0.309$) and item 7 slightly higher on factor 1 ($a^2 = 0.311$). Since the reliability of the individual subscales did not decline because of the addition of the above-mentioned items, item 7 was assigned for the further calculation of subscale 1 and item 3 for the calculation of subscale 2. The 2 sum scores of the subscales were correlated by $r = 0.605$. The individual loadings and commonalities are shown in table 3.

Reliability

Cronbach's α was chosen to calculate reliability. The total score of the TBES-G showed good overall reliability ($\alpha = 0.869$). The reliability of subscale 1 was $\alpha = 0.803$, and that of subscale 2 was $\alpha = 0.802$.

Validity for Panic Disorder/Agoraphobia

In order to determine construct validity, the TBES-G sum score calculated in the second part of the online questionnaire was correlated to data from the third part of the online questionnaire (obstacles to using exposure for panic disorder and agoraphobia). The relationship of the sum score of the TBES-G a) to the number of types of exposure (0–4), as well as b) to the sum score of all obstacles to the use of exposure methods, was ascertained by Pearson correlations. The sum score of all obstacles reflected how many ob-

Table 4. Differences in the sum score of the TBES-G in different subpopulations

	M (SD)	Differences		
		t	p	ES (d _s)
Gender				
Male	16.74 (9.03)			
Female	18.95 (10.25)			
Relationship status		-0.930	0.354	0.202
Single	16.75 (8.00)			
In a stable partnership	18.78 (10.28)			
License		-1.397	0.164	0.193
Yes	17.58 (9.55)			
No	19.52 (10.49)			
Performance of the specified means of delivery of exposure		-1.364	0.174	0.567
At least one performance	17.81 (10.07)			
No performance	23.50 (9.03)			
Performance of programmed self-exposure		-1.488	0.139	0.445
At least one performance	17.71 (10.06)			
No performance	22.17 (9.57)			
Performance of therapist-guided exposure		-3.774	<0.001*	1.174
At least one performance	17.32 (9.69)			
No performance	28.73 (10.23)			
Completion of a course of study in psychology		0.986	0.325	0.336
Yes	18.40 (10.14)			
No	21.78 (7.73)			

*Correlation is significant at the level of 0.05 (2-sided).
ES = effect size, Cohen's d_s calculated according to Lakens [2013].
M = mean; SD = standard deviation; TBES-G = German Version of the Therapist Beliefs about Exposure Scale.

stacles there were and how pronounced they were. A higher score means that there were more and stronger obstacles to using exposure in the treatment of panic disorder/agoraphobia.

The number of types of exposure was negatively correlated with the sum score of the TBES-G total scale ($r(182) = -0.227, p = 0.002$), with the sum score of subscale 1 ($r(182) = -0.216, p = 0.003$), and with the sum score of subscale 2 ($r(182) = -0.199, p = 0.007$). This suggests that a negative attitude towards the exposure method was correlated with less frequent use of exposure modalities.

The sum score of all the obstacles showed a significant positive correlation with the sum score of the TBES-G total scale ($r(182) = 0.288, p < 0.001$), the subscale 1 ($r(182) = 0.280, p < 0.001$), and the subscale 2 ($r(182) = 0.248, p < 0.001$). These significant positive correlations signify that a more negative attitude towards the exposure method was associated with more obstacles to the use of exposure in clinical practice, which may be considered as a preliminary indication of convergent validity of the TBES-G.

Therapists' Beliefs about Exposure Therapy

Differences in Therapists' Beliefs about Exposure Therapy in Different Subpopulations

Parametric techniques were performed to find out which variables differ in the sum score of the questionnaire. The sum score did not show, strictly speaking, an exactly normal distribution in the histogram; it was right-skewed. The skewness and kurtosis (0.807 and 1.833, respectively), as well as the Kolmogorov-Smirnov Test

($D(090) = 0.083, p = 0.001$), signified that the score was not normally distributed. Due to the sufficient robustness of the t-tests against deviations from the normal distribution in the case of larger samples ($n \geq 100$; e.g., Lumley et al. [2002]), non-parametric methods of analysis were omitted in favor of the t-test. The results are shown in table 4.

A 3-step 1-factorial ANOVA was performed to determine whether child and adolescent therapists, adult therapists, and therapists with training for both categories differed in their TBES-G sum scores. This yielded a significant result ($F(2, 206) = 3.581; p = 0.030, \eta^2 = 0.034$). The t-tests showed a significant difference between the adult therapists and the child and adolescent therapists ($t(194) = -2.611, p = 0.010$), but not between the adult therapists and therapists working in both areas ($t(194) = 0.648, p = 0.518$), and also not between child and adolescent therapists, and therapists who work in both areas ($t(24) = -1.977, p = 0.060$).

Relationships between Beliefs of Therapists about Exposure Therapy and Therapist Variables

In the last step, we examined Pearson correlations. There were basically no significant correlations between negative beliefs and the therapist variables: age ($r(207) = 0.136, p = 0.050$), number of outpatient psychotherapy sessions conducted ($r(198) = 0.036, p = 0.617$), total number of patients treated who had a diagnosis of 'panic disorder with agoraphobia', 'panic disorder without agoraphobia', and 'agoraphobia without a history of panic disorder' ($r(206) = -0.099-0.014, p = 0.154-0.840$), number of therapist-guided sessions with exposure in vivo with the last patient treated

($r(139) = -0.128, p = 0.131$), and frequency of self-administered exposures in vivo ($r(127) = 0.07, p = 0.376$) and of IE ($r(98) = -0.106, p = 0.292$) with the last patient treated. Only the relationship between the number of therapy sessions, and IE with the last patient treated, was significant ($r(154) = 0.159, p = 0.047$), with a small effect.

Discussion

The preliminary indications suggest that therapists' negative beliefs about exposure therapy lead to reduction of the frequency with which this method of intervention is used [e.g., Meyer et al., 2014]. To facilitate research on this topic, Deacon et al. [2013] developed a scale for capturing therapists' negative beliefs about exposure therapy. To be able to use the scale in German-language research, this study examined the psychometric properties and preliminary indications of the construct validity for agoraphobia and panic disorder in a German adaptation of the TBES. This German version (TBES-G) is comprised of 21 items and was validated with a sample of $N = 184$ participants. The instrument showed high overall reliability as well as preliminary indications of good construct validity and suitable psychometric properties at the item level. With regard to the factor structure, there was a 2-factor solution.

The average parametric values of the TBES-G turned out to be somewhat lower than those of the TBES [Deacon et al., 2013]. The mean sum score of the TBES-G was significantly lower than that of the TBES, which was also true for the mean values of the individual items. The histogram of the sum score was left-skewed and showed no normal distribution. The lower values of the mean discriminative power and the average inter-item correlations indicated a multi-dimensional factor structure. Factor analysis resulted in a 2-dimensional factor structure, interpreted as 'Concerns about rejection by the patient' and 'Concern about side effects'. The items could be assigned to these 2 factors very well. The first factor captures the lack of acceptance of exposure therapy and concern about rejection of the method by the patient. Typical items address the possible higher rate of termination, refusal of treatment by the patient, or failure to meet the individual needs of the patient. The second factor summarizes the possible harm and side effects of exposure therapy for patients and therapists, such as (re-)traumatization of the patient or therapist, physical harm (e.g., loss of consciousness) during the exposure, a malpractice claim because of a possible error or endangering the patient's confidentiality. Item 3 (Exposure therapy works poorly with complex cases (e.g., if a patient has multiple diagnoses)) and item 7 (Exposure is associated with a less close therapeutic relationship than other methods of psychotherapy) could not be clearly assigned to either of the subscales. Perhaps it could be eliminated from the TBES-G.

Overall, both factors identified in the factor analysis correlated with each other by $r = 0.483$ and therefore accounted for 23.33% of the common variance. This result signifies that the 2 factors actually measure different facets, thus supporting the 2-factor structure.

Negative beliefs about exposure therapy were positively correlated with the sum score of all 16 listed obstacles to all 4 types of treatment for panic disorder/agoraphobia. The more negative the therapists' beliefs were, the more obstacles to exposure therapy they specified for these disorders, and the more strongly these reasons prevented the performance of such therapy. This relationship remained for the sum scores of both subscales, suggesting that the negative beliefs could have led to more obstacles. Our data also show that participants with stronger negative beliefs about exposure therapy have actually used the above-mentioned types of exposure less in the treatment of panic disorder/agoraphobia. Here, too, the relationship appeared with both subscales. The finding is coherent with the results of Meyer et al. [2014] and Deacon et al. [2013], according to which negative beliefs lead to less frequent use of this therapeutic method. It can be assumed that therapists with a more positive attitude to the exposure method are more likely to take advantage of the repertoire of possible types of exposure. These findings can therefore be judged as an indication of good construct validity of the TBES-G, but cannot readily be generalized to the treatment of other disorders. Furthermore, it should be noted that in some patients, exposure treatment in self-management may be adequate, so that avoidance of therapist-guided exposure does not necessarily signify a negative attitude toward the exposure method.

Attitudes towards exposure therapy were independent of the age of the therapists and thus also did not correlate with the number of completed outpatient psychotherapy sessions and the number of treated patients who had anxiety disorders. In the study by Becker et al. [2004], experienced psychologists reported significantly fewer contraindicators for the use of IE in PTSD than did their inexperienced colleagues, citing as contraindicators, for example, comorbid disorder, severe suicidality, or dissociation. The experienced colleagues also used IE more often in trauma patients. Accordingly, in our study a relationship would have been expected between attitudes towards exposure therapy and the experience of the therapists, measured by the number of previously treated patients. Perhaps this discrepancy can be explained by the fact that our study did not explicitly investigate the use of exposure for treatment of PTSD.

A higher TBES-G sum score was negatively associated with the performance of therapist-guided exposure, but not with programmed self-exposure. That means that the weaker the negative attitude to exposure, the more the therapist actively guided the exposure. It is understandable that therapists with less negative beliefs conduct an exposure with more personal commitment and reliability, and thus are more willing to guide the patient during the exposure.

Our study also found that the number of therapeutic sessions with IE, that were held with the most recently treated patient with panic disorder/agoraphobia, had a low positive correlation with a negative attitude towards exposure therapy. In other words, therapists who had used IE more often also had more negative beliefs about exposure therapy. We are unable to explain this finding. It also contradicts the above-cited results of Meyer et al. [2014], for

example, who see a relationship between negative attitudes towards exposure therapy and frequency of use. It is questionable, however, how valid the data we gathered in this connection are. The participants were supposed to specify the frequency of exposure therapy sessions in an open response field; no response format was given. So whole numbers or large ranges and sometimes an average number per week were given. If ranges were given, a mean value was calculated. But if an average weekly number was given, this data was considered to be lacking. Since the number of sessions with exposure therapy depends on the overall duration of the therapy, the numbers are only comparable to a very limited extent. It remains to be investigated whether negative beliefs lead to exposure therapy not being used as often.

A final criticism is that the sample, despite the large age range of the therapists and a wide spectrum of therapeutic experience, was quite homogeneous in terms of gender and the proportion of adult therapists. Since it was a cross-sectional design, no assertions about causal relationships could be made and no retest stability could be determined. Although the various types of exposure were requested, there was not sufficient assessment of the way, the frequency, and the intensity of how these were used with the patient and to what extent the therapists supported the patient. The actual behavior of the therapist was selected as an external criterion, but self-report data are not objective and are subject to potential bias. In order to minimize memory distortion, the therapists were asked to limit their response to the most recently treated panic disorder/agoraphobia patient. Since completion of the TBES-G was associated with a survey of obstacles to the use of exposure for these disorders only, the therapists' data on exposure may have implicitly related to panic disorder/agoraphobia, even though the instructions to the second part explicitly asked about attitudes towards 'exposure as a method of treatment for anxiety disorders'. Probably, the use of exposure for other disorders (e.g., PTSD) is seen as more crucial, or at least different.

The question of how to interpret the sum score of the TBES-G is highly relevant. By analogy to the Anglo-American version, individual scores from 0 to 84 can be achieved, whereby the sum score '0' is the maximum positive and the sum score '84' is the maximum negative attitude to exposure per se as a treatment method. In our view, a large proportion of the statements in the TBES-G are not correct and lack empirical evidence (e.g., item 15: 'Exposure therapy often causes clients' anxiety symptoms to worsen'), which is why we consider the answer 'totally disagree' (0 points) the desirable one. Other statements (e.g., item 11: 'Conducting exposure therapy sessions outside the office endangers the client's confiden-

tiality') can be seen as quite plausible, so that here other answers could be more appropriate (e.g., 'agree' (3 points), or 'unsure' (2 points)). It may make sense to define a cut-off value for the TBES-G sum score as an indication of an overall inappropriately negative belief about the exposure method. Further research to investigate this matter would be worthwhile. We would like to point out that a very positive attitude towards the exposure method should not be equated with its uncritical, unreflective use in patients. The exposure method is a very effective treatment in the treatment of inappropriate anxieties, but it is not a panacea for any emotional difficulties ('when exposure is the hammer, everything is a nail' [Abramowitz, 2013, p 551]).

In summary, the German version of the TBES is a reliable measure and gave preliminary indications of good construct validity. Therapists' negative beliefs about exposure therapy loaded on 2 factors, showed a significant negative relationship to the performance of therapist-guided exposure, and were positively associated with obstacles to exposure therapy. It would be interesting to use this scale in the future to explore the stability of the negative beliefs. Attitude towards the exposure method should also be studied in a differentiated way with various disorders.

This scale makes it possible for the first time to capture the attitudes of therapists towards exposure therapy in German-speaking countries. It can therefore be an important foundation for further research on dissemination and training. New research questions could relate to the extent to which very negative beliefs on the part of therapists prevent the performance of exposure for certain disorders and what the effects are of specific training or continuing education. Further research in this area can contribute to the goal of more consistent use of exposure therapy in clinical practice.

Online Supplemental Material

Online Supplemental Material To access the supplemental material, please refer to www.karger.com/?DOI=479890.

Disclosure Statement

The authors declare that they have no conflicts of interest regarding this work.

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