



Theory-based training strategies for modifying practitioner concerns about exposure therapy



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ABSTRACT

Despite the well-established efficacy of exposure therapy in the treatment of pathological anxiety, many therapists believe this treatment carries an unacceptably high risk for harm, is intolerable for patients, and poses a number of ethical quandaries. These beliefs have been shown to account for two related problems: (a) underutilization of exposure therapy, and (b) overly cautious and suboptimal delivery of the treatment, which likely attenuates treatment outcomes. At present, there is little guidance for those who train exposure therapists to address these concerns. This article reviews therapist negative beliefs about exposure therapy and discusses their modification based on findings from social and cognitive psychology pertinent to belief change, including dual-processing in reasoning, the need for cognition and affect, and attitude inoculation. A number of strategies are offered for augmenting training in exposure therapy in order to promote positive beliefs about the treatment. These strategies involve: (a) therapists engaging in simulated exposure therapy exercises and presenting arguments in defense of exposure's safety, tolerability, and ethicality, and (b) training therapists using emotion-based appeals (e.g., case examples) to supplement research findings. Directions for future research on practitioner concerns about exposure therapy are discussed.

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1. Introduction

Exposure therapy is a central component of many cognitive-behavioral (CBT) approaches for anxiety disorders and entails guiding patients in repeatedly confronting feared stimuli. A wealth of randomized controlled trials demonstrate the effectiveness of exposure-based treatments for anxiety disorders such as panic disorder (e.g., [Gloster et al., 2011](#)) and obsessive-compulsive disorder (e.g., [Foa et al., 2005](#)), and meta-analyses support exposure-based therapy as an effective transdiagnostic approach for pathological anxiety (e.g., [Norton & Price, 2007](#)). The [National Institute for Clinical Excellence \(2011\)](#) and the [American Psychiatric Association \(2009\)](#) have published practice guidelines advocating exposure-based therapies as first-line treatment approaches for anxiety disorders.

Despite its well-documented effectiveness in the treatment of pathological anxiety, exposure therapy is uniquely difficult to disseminate to practitioners owing to pervasive concerns about its use. [Richard and Gloster \(2007\)](#) noted that exposure suffers from a “public relations problem” among therapists, many of whom are concerned with the perceived intolerability and questionable

ethicality of the treatment. More recently, [Deacon, Farrell, et al. \(2013-this issue\)](#) validated the Therapist Beliefs about Exposure Scale using a sample of over 600 practicing therapists. Mean scores on the scale indicated that the average clinician harbors a moderate degree of negative beliefs about exposure therapy. Surprisingly, negative beliefs about exposure are evident even among self-reported exposure therapists ([Deacon, Farrell, et al., 2013-this issue](#); [Deacon, Lickel, Farrell, Kemp, & Hipol, 2013](#); [Richard & Gloster, 2007](#)). Clearly, in spite of its effectiveness, exposure therapy is viewed by many mental health professionals as a treatment that carries a number of unacceptable risks.

2. Negative beliefs about exposure therapy

Many therapists hold negative beliefs about evidence-based treatments in general, including concerns related to their perceived rigidity, insensitivity to patients' unique needs, damaging effects on the therapeutic relationship, and inapplicability to actual clinical practice ([Addis & Krasnow, 2000](#); [Addis, Wade, & Hatgis, 1999](#)). Although these broad-based beliefs about evidence-based treatments are likely applicable to exposure therapy, this treatment is associated with a variety of unique therapist concerns. Based on a comprehensive literature review of therapist reservations about the treatment, [Deacon, Farrell, et al. \(2013-this issue\)](#) identified an array of negative beliefs specific to exposure therapy. Although a

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factor analysis indicated that these beliefs load onto a single factor, three thematically distinct domains of therapist concerns were evident. Specifically, exposure therapy is widely perceived as harmful, intolerable, and unethical.

2.1. Exposure therapy is harmful

Many clinicians worry that exposure therapy will directly produce harmful physical and/or psychological consequences, either for the patient or the therapist. In the context of imaginal exposure for patients who have experienced trauma, therapists often fear that discussion of trauma-related memories will “retraumatize” the patient (Cook, Schnurr, & Foa, 2004) or cause the therapist to experience “vicarious traumatization” (Zoellner et al., 2011). Therapists who provide interoceptive exposure to patients with panic disorder report concerns that this treatment may cause patients to lose consciousness and/or “decompensate” (Deacon, Lickel, et al., 2013). Ironically, such concerns represent the very maladaptive beliefs about the dangerousness of anxiety-related body sensations that interoceptive exposure is intended to modify (Craske & Barlow, 2008). Finally, therapists worry that exposure therapy may lead to a worsening of patients’ symptoms, attrition, and treatment refusal (Becker, Zayfert, & Anderson, 2004; Deacon, Lickel, et al., 2013; Feeny, Hembree, & Zoellner, 2003). These perceived dangers likely cause many practitioners to view exposure therapy as posing an unacceptable risk of harm.

2.2. Exposure therapy is intolerable

In addition to its perceived harmfulness, exposure therapy is often believed by therapists to be intolerable to patients who undergo it (Rosqvist, 2005). Many clinicians believe that patients are likely to refuse participation in exposure-based treatment and will drop out at higher rates than other psychotherapies (van Minnen, Hendriks, & Olf, 2010). Such concerns are especially pronounced in the context of intensive exposure approaches, such as prolonged hyperventilation for patients with panic disorder (Deacon, Lickel, et al., 2013). A related therapist belief is that exposure therapy must be delivered in a cautious, low-intensity manner in order to ensure its tolerability. In support of this notion, therapists concerned with the potential dangers of interoceptive exposure (e.g., decompensation) are especially likely to use adjunctive diaphragmatic breathing techniques with their panic disorder patients (Deacon, Lickel, et al., 2013). Many practitioners believe that arousal reduction strategies (e.g., relaxation, controlled breathing) are necessary for patients to tolerate exposure therapy. Indeed, this belief was the single most commonly endorsed reservation about exposure therapy in a large sample of practicing clinicians (Deacon, Farrell, et al., 2013–this issue).

2.3. Exposure therapy is unethical

Exposure therapy is perceived by some practitioners as inherently unethical. To illustrate, a clinician quoted in a *New York Times* article on exposure therapy titled “The Cruellest Cure” characterized this approach as “torture, plain and simple” (Slater, 2003). This belief likely reflects the view that the deliberate evocation of distress inherent in exposure-based treatment is at odds with the American Psychological Association’s *Ethical Principles of Psychologists and Code of Conduct* (2002), which directs therapists to “do no harm.” Similarly, therapists have expressed concern that exposure is associated with increased risk for legal troubles, such as being the target of a malpractice lawsuit or accused of ethical violations (Kovacs, 1996). Even practitioners who do not view exposure therapy as inherently unethical may worry that this treatment poses serious ethical risks such as endangering

patients’ confidentiality or facilitating boundary violations by conducting exposure sessions outside the office (Olatunji, Deacon, & Abramowitz, 2009).

3. Clinical implications of negative beliefs about exposure therapy

Negative beliefs about exposure therapy have a two-fold detrimental impact on the dissemination of this treatment. First, several studies have demonstrated these beliefs to be influential in therapists’ decisions to forego use of exposure (e.g., Becker et al., 2004; van Minnen et al., 2010). Negative beliefs about exposure are also problematic because they elicit an overly cautious delivery style among exposure-using therapists that differs markedly from the widely advocated prolonged and intense delivery of exposure (e.g., Abramowitz, Deacon, & Whiteside, 2011). Two studies using correlational designs have shown exposure-related concerns to be associated with a suboptimal delivery style, including allowance of safety behaviors, reassuring patients of safety, and premature termination of exposure tasks (Deacon, Farrell, et al., 2013–this issue; Harned, Dimeff, Woodcock, & Contreras, 2013–this issue). An experimental investigation demonstrated that therapists with negative beliefs about exposure exhibited more cautious delivery of the treatment (i.e., selection of less anxiety-evoking exposure tasks, greater use of arousal-reduction techniques) compared to therapists with more positive beliefs (Farrell, Deacon, Kemp, Dixon, & Sy, 2013–this issue). Taken together, these findings imply that therapists who hold negative beliefs about exposure therapy are likely to either eschew its use or deliver it with excessive caution.

The detrimental effects of negative beliefs about exposure on its delivery have important implications for treatment outcome. Inhibitory learning theory (Craske et al., 2008) suggests that exposure therapy is effective to the extent that patients experience a violation of negative expectancies for harm and learn that fear is tolerable. The unnecessarily cautious delivery of exposure therapy may result in less improvement by preventing patients from acquiring sufficient inhibitory learning. Accordingly, research suggests that cautious delivery of exposure can produce suboptimal outcomes. For example, a recent study examining variations in the delivery of interoceptive exposure showed that a cautious delivery style was associated with attenuated outcomes and high rates of fear sensitization compared to intensive delivery of the treatment (Deacon, Kemp, et al., 2013). In this study, aspects of a more cautious approach to exposure included use of anxiety-reduction strategies (i.e., diaphragmatic breathing) between exposure trials, limited number of exposure trials, and lengthy rest periods between trials. A striking example of the effects of exposure delivery style and outcomes is a clinical trial by the Pediatric OCD Treatment Study Team (2004) in which exposure therapy was provided at two study sites. The effect size for exposure was more than four times greater at one site than the other despite numerous measures taken to standardize treatment delivery across study sites. According to one of the primary authors of this study (M.E. Franklin), this difference was likely driven by therapists at one site implementing exposure in a markedly more cautious manner (e.g., creating less intense exposure tasks) than the other site (see Deacon & Farrell, 2013). In summary, clinicians who deliver exposure therapy in a cautious manner owing to negative beliefs about this treatment may not achieve optimal patient outcomes.

4. Augmenting training by promoting positive beliefs about exposure therapy

Addressing therapist concerns about exposure therapy is of paramount importance in improving the dissemination of this

Table 1
Overview of theory-based suggestions for modifying practitioner concerns about exposure.

Suggestion	Theoretical underpinning	Recommended strategies
1. Trainees should include experiential activities designed to facilitate associative pairing between exposure and notions of “safe,” “tolerable,” and “ethical.”	Dual-processes in reasoning. An associative (implicit) system and an analytical (explicit) system work in concert to guide judgment. Change in one system does not always produce change in the other. Thus, although therapists may analytically reason that exposure is a safe, tolerable, and ethical treatment, they may implicitly continue to associate exposure with danger, intolerability, and unethicity.	Therapists engage in interoceptive exposure exercises to violate the expectation that high anxiety produces harmful consequences (e.g., suffocation, “going crazy”) and is intolerable. Therapists conduct exposure to common fear themes or to their area of specialization (e.g., social mishap tasks, contamination-based exercises) to violate the assumption that these tasks elicit intolerable discomfort. Therapists work in pairs to simulate conducting exposure tasks with patients in public settings to violate associations between exposure and unethical practices (e.g., dual relationships, confidentiality breaches).
2. Trainees should be provided with information about exposure therapy that balances empirical and emotional appeals.	Need for cognition (NFC) vs. Need for Affect (NFA). Research suggests that NFC and NFA are negatively correlated and distributed uniformly among therapists. Whereas therapists high in NFC are persuaded more by empirical findings, high NFA therapists are more persuaded by emotional appeals, such as case examples.	Therapists are given case presentations spanning a variety of anxiety-related problems depicting successful exposure therapy without any negative outcomes (e.g., medical emergencies, intolerable patient anxiety). Therapists are presented with testimonials from former patients who describe their experience with exposure therapy as safe, tolerable, and ethical.
3. Trainees should defend the position that exposure is a safe, tolerable, and ethical treatment.	Attitude inoculation. Newly formed beliefs are susceptible to erosion. Research shows that beliefs become strengthened when people defend their position against challenges and formulate arguments in their own words.	Therapists refute a list of hypothetical criticisms that exposure therapy is unsafe, intolerable, and unethical. Therapists write letters sharing their positive beliefs about exposure therapy to a hypothetical patient reluctant to undergo the treatment.

treatment. The utilization and competent delivery of exposure therapy for anxiety may be improved if therapists are encouraged to view this treatment as posing minimal risk for harm, tolerable and acceptable to patients, and ethical by virtue of carefully balancing patients' rights with effective strategies for overcoming fears. Promoting positive beliefs about exposure therapy may also enhance therapist confidence in implementing the treatment (Gunter & Whittal, 2010), which has been shown to elicit more favorable treatment outcomes (Williams & Chambless, 1990). Increasing patient access to exposure therapy requires effective strategies for dispelling pervasive therapist reservations about this treatment. However, didactic instruction in the theory and practice of exposure therapy may not be sufficient to instill positive beliefs about this treatment to ensure its optimal delivery (Farrell et al., 2013-this issue; Gunter & Whittal, 2010). Indeed, Deacon, Farrell, et al. (2013-this issue) demonstrated that although didactic training in exposure therapy reduced negative beliefs about this treatment, concerns about exposure persisted even after thorough instruction in its delivery. Further, didactic training produced substantially less change in negative beliefs about exposure among therapists who use this treatment than among novice clinicians.

To date, the literature on addressing therapist concerns about exposure therapy is underdeveloped and primarily consists of anecdotal observation rather than empirical investigation. Most authors have emphasized the value of relevant research studies to debunk myths about exposure therapy (e.g., Cook et al., 2004; Deacon & Farrell, 2013; Feeny, Hembree, & Zoellner, 2003; Olatunji et al., 2009). Indeed, the provision of research findings that dispel misconceptions about exposure therapy appears somewhat useful in improving attitudes toward, and delivery of, the treatment (Farrell et al., 2013-this issue). However, negative beliefs about exposure persist following didactic instruction (Deacon, Farrell, et al., 2013-this issue), suggesting that additional strategies are necessary to allay therapist concerns about exposure therapy. Put simply, educating therapists about relevant research findings does not completely solve the problem. The substantial room for improvement associated with didactic instruction alone, combined with a paucity of research on effective strategies

for modifying therapist reservations about exposure (cf., Harned, Dimeff, Woodcock, & Skutch, 2011), highlights the need for novel, theory-based approaches to therapist training in this approach. Fortunately, research on belief modification from the social and cognitive psychology literatures suggests several potentially effective strategies to promote positive beliefs about exposure therapy. These strategies, and their theoretical basis, are described below and summarized in Table 1.

5. Theory-based training strategies for promoting positive beliefs about exposure therapy

5.1. Training should include experiential activities designed to facilitate associative pairing between exposure and notions of “safe,” “tolerable,” and “ethical”

5.1.1. Theoretical background

In determining strategies for modifying therapist reservations about exposure, it is important to consider belief change at both the explicit and implicit level. A wealth of research supports the existence of a dual-processing system that governs our reasoning and information processing (e.g., Evans, 2003; Sloman, 1996). In this dual-processing model, an associative system relies upon heuristics and automatic associations between concepts to make time-efficient (although not always correct) judgments while a rule-based system utilizes rational analysis to carefully evaluate concepts (Sloman, 1996). Theorists have proposed that these two systems interactively work to formulate judgments, although there are often inconsistencies between the two systems that can lead to errors in judgment (Gawronski & Bodenhausen, 2006).

Erroneous judgment often occurs when the associative system trumps the rules-based system, producing a judgment based on an association heuristic that may be faulty (De Neys, 2006). In addition, cognitive change in one system does not always elicit the desired change in the other. Rule-based reasoning (e.g., “Flying is not dangerous because many people fly in planes every day without dying”) can produce belief change on an explicit level without modifying the underlying implicit link (e.g., flying=dangerous)

in the associative system (Ouimet, Gawronski, & Dozois, 2009), ultimately limiting attitudinal and behavioral change (Vasey, Harbaugh, Buffington, Jones, & Fazio, 2012). Furthermore, targeting only the rule-based system can ironically backfire by strengthening the underlying link in the associative system. To illustrate, Gawronski, Deutsch, Mbirikou, Seibt, and Strack (2008) found that an intervention aimed at decreasing stereotypes toward a social group effectively reduced participants' reported (i.e., explicit) negative beliefs about this group but paradoxically increased participants' implicit stereotypical associations.

The disharmony between the associative and rule-based systems posited by dual-processing theorists is likely to affect the outcome of efforts to address practitioners' negative beliefs about exposure therapy. Exposure therapy may remain linked to negative consequences (e.g., exposure = harmful) in the associative system despite didactic training designed to facilitate explicit attitude change regarding the safety, tolerability, and ethicality of this treatment. Thus, efforts aimed at belief change in exposure therapists should address the associative and rules-based systems in concert through strategies that target both explicit and implicit beliefs.

Whereas rational appeals are more effective at eliciting belief change in the rules-based system, changes in the associative structure are primarily achieved via conditioning processes whereby a concept is paired with stimuli that subsequently alter attitudes toward the idea (Gawronski & Bodenhausen, 2006). For example, implicit attitudes toward a neutral image can change based on whether the image is paired with positive or negative stimuli (e.g., Hermans, Vansteenwegen, Crombez, Baeyens, & Eelen, 2002). Accordingly, beliefs about exposure therapy may improve through direct participation in activities that facilitate associations between exposure therapy and notions of "safe," "tolerable," and "ethical." Craske et al. (2008) argued that the acquisition of non-threat associations occurs via pairing of a stimulus previously associated with threat (e.g., flying) and the non-occurrence of the expected outcome (e.g., airplane landing safely). The resulting non-threat association (e.g., flying = safe) conceivably achieves consistency between the associative system and the rules-based system. If therapists' expectancies about exposure being harmful, intolerable, and unethical are violated via personal experience to the contrary, congruence between associative and rules-based reasoning systems may be achieved. Toward this end, strategies for promoting positive beliefs about exposure therapy designed to produce both explicit and implicit attitude change are described below.

5.1.2. Training strategies

A number of activities can be used to violate therapist expectations about exposure producing physical or psychological harm, or being impossible to tolerate. Therapists are encouraged to engage in interoceptive exposure exercises in order to experience the same anxiety-related body sensations their patients undergo in exposure tasks. In particular, prolonged and intensive hyperventilation conducted without controlled breathing or lengthy between-trial rest periods is highly effective at producing pronounced body sensations and demonstrating their safety and tolerability (Deacon, Kemp, et al., 2013; Deacon et al., 2012). Therapists who participate in this interoceptive exposure task may learn that even very intense anxiety-related sensations do not produce medical or psychological catastrophes (e.g., loss of consciousness, decompensation). Additionally, experiencing intense anxiety sensations for a prolonged period of time is likely to strengthen therapists' belief in the tolerability of exposure therapy despite the temporary discomfort it elicits. Although this interoceptive exposure task may not be enjoyable, it provides a valuable opportunity for clinicians to form associations between exposure therapy and harmless, tolerable outcomes.

Trainee exposure therapists are also encouraged to engage in exercises representative of common exposure task themes. Although exposure tasks devised in clinical practice are always individualized to the patient's unique presentation, many exposure tasks share common themes. For example, socially phobic patients often overestimate the severity of acting in an embarrassing manner, a cognitive bias often treated with social mishap tasks such as spilling a drink in a crowded restaurant (Fang, Sawyer, Asnaani, & Hofmann, 2013). Just as patients are able to learn via these tasks that embarrassment is more tolerable and acceptable than expected, therapists' perceptions of intolerability of exposure and its emotional consequences may also be violated. Accordingly, therapists are advised to conduct their own exposures to a number of commonly observed fears in practice (e.g., social embarrassment, contamination), and/or fears relevant to their area of specialization, in order to establish non-threat associations pertinent to exposure therapy. Therapists should engage in these exposures in the same prolonged and intensive manner, without use of safety behaviors, that exposure tasks are typically delivered to anxious patients. By encountering commonly observed feared scenarios or if possible, stimuli that they themselves have some fear of, exposure therapists are able to learn firsthand that exposure is tolerable and unlikely to produce harmful outcomes.

Although therapists should be familiar with logical arguments promoting the ethicality of exposure therapy (e.g., Deacon & Farrell, 2013; Olatunji et al., 2009), experiential activities are unlikely to convince clinicians who believe it unacceptable to elicit even temporary discomfort in their patients that exposure is an inherently ethical approach. Nevertheless, experiential exercises may be useful in targeting more specific concerns regarding exposure-related ethical dilemmas. To address concerns that exposure sessions conducted outside of the office will compromise patient confidentiality and/or lead to boundary violations, therapists are encouraged to engage in a simulated therapy session in a public setting. Clinicians working in pairs may conduct an exposure therapy session in a public area (e.g., shopping mall), with one playing the role of therapist and the other playing the role of patient. In this role-play, therapists practice strategies designed to minimize the risk of ethical infraction outlined by Olatunji et al. (2009) by preserving confidentiality (e.g., inconspicuously discussing the process and outcome of the exposure) and maintaining appropriate boundaries (e.g., keeping conversation focused on the exposure task). This role-play activity is expected to demonstrate to therapists that appropriately discreet interactions with their patients go largely unnoticed by other people, and that proper management of the boundary crossing inherent in conducting exposure "field trips" mitigates the risk of a boundary violation. Consequently, this experiential activity allows therapists to associate exposure conducted outside of the office with ethical practice.

5.2. Trainees should be provided with information about exposure therapy that balances empirical and emotional appeals

5.2.1. Theoretical background

Although exposure therapy proponents often attempt to debunk negative beliefs about this treatment by mustering science-based arguments in support of its safety, tolerability, and ethicality (e.g., Deacon & Farrell, 2013; Olatunji et al., 2009), research findings alone may have little effect on therapists' beliefs (Stewart, Stirman, & Chambless, 2012). To illustrate, Cohen, Sargent, and Sechrest (1986) found that practitioners rated information obtained via collegial discussions about treatments in the context of individual cases to be more appealing and influential than empirical terminology (e.g., methodology, statistical analyses). The limited appeal of research-based arguments may be understood in the context of two negatively correlated concepts in the attitudinal persuasion

literature, the need for cognition (NFC; Cacioppo & Petty, 1982) and the need for affect (NFA; Maio & Esses, 2001). Whereas NFC is characterized by an inclination to engage in effortful cognitive activities and is associated with greater evaluation of ideas (Cacioppo & Petty, 1982), NFA refers to the tendency to engage in emotion-inducing events (Maio & Esses, 2001). Previous studies have shown that the appeal of persuasive efforts is dependent upon NFC and NFA. For example, a study by Edwards (1990) demonstrated an important matching effect: affect-based attitudes (i.e., based on feelings associated with the attitude object) are more readily modified by affective persuasion efforts than cognitive persuasion. This matching effect was further extended by Haddock, Maio, Arnold, and Huskinson (2008) who showed that participants scoring higher in NFA were more receptive to affect-based persuasion but not receptive to cognitive-based persuasion. However, participants higher in NFC were much more receptive to cognitive-based persuasion (e.g., analytical arguments) than affect-based persuasion (Haddock et al., 2008).

Preliminary research has shown that NFC and NFA are distributed heterogeneously among both clinical psychologists (Hurtado et al., 2012) and students in clinical psychology graduate programs (Swedish et al., 2012). Additionally, a recent study replicated the aforementioned matching effect for attitudinal persuasion among a therapist sample: high NFA participants' beliefs about empirically-supported treatments (ESTs) were persuaded more by affective appeals, and participants high in NFC were more receptive to analytical persuasive efforts, such as summaries of empirical findings (Gahr, Seligman, Swedish, Geers, & Hovey, 2012). In this study, individual case examples were used as the primary affective persuasion strategies. Stewart and Chambless (2010) found case examples to be more influential in altering therapist interest in using ESTs than the presentation of empirical findings.

The above findings indicate a strong likelihood that both NFC and NFA will vary substantially in exposure therapy trainees. Therefore, it is important that the information presented to them contain not only empirical findings more likely to appeal to trainees high in NFC, but also individual case examples from exposure practice and related narratives that are more likely to encourage trainees high in NFA to adopt positive beliefs about the treatment.

5.2.2. Training strategies

Individuals who train exposure therapists are advised to provide case examples taken from actual practice in which the prolonged and intense delivery of the treatment does not lead to harmful consequences and is experienced as acceptable and ethical by patients. Ideally, therapists are presented with multiple case examples that span a variety of anxiety-related problems and exposure-based treatment approaches. For example, a case presentation describing the use of interoceptive exposure may reveal that despite the patient experiencing intense anxiety-related body sensations and subsequent heightened fear, this patient did not experience any serious medical or psychological consequences and was able to tolerate the treatment well. In addition, therapists are presented with a case of a contamination-fearing patient who was directed to contact increasingly "dirty" objects and surfaces, such as public floors, garbage bins, and toilet seats. This case presentation should include information about the patient's ability to tolerate the intensity of the exposures as well as perceiving the treatment as an ethical approach to targeting his or her difficulties. Finally, trainers are advised to present a case depicting the use of prolonged imaginal exposure for PTSD in which a patient's distressing confrontation of a traumatic memory was nonetheless experienced as a tolerable and ethical treatment that was not retraumatizing.

Case presentations describing unique patient difficulties and exposure-based strategies may also be supplemented with further

affect-based material. For example, therapists may be presented with a series of testimonials from former patients who underwent exposure successfully. These testimonials should include information about not only the effectiveness of the treatment, but also the patient's favorable perceptions of its acceptability and tolerability in addition to the non-occurrence of harmful outcomes. Trainee therapists are also presented with information regarding improvements to former patients' quality of life that they attribute to exposure therapy. For example, the patient testimonials may contain information about how improvements in functional ability and mood regulation directly led to a more enjoyable lifestyle for the patient (e.g., being able to engage in important, highly-valued activities). Finally, in our experience, some patients who have undergone exposure therapy have been willing to speak publicly and attest to the tolerability and ethicality of the treatment, and this type of information should be presented to exposure therapists as an additional affect-based appeal. One of us treated a victim of sexual assault who recently spoke at an event on her college campus promoting awareness of sexual assault and describing her successful (and tolerable) experience with exposure therapy.

5.3. Trainees should defend the position that exposure is a safe, tolerable, and ethical treatment

5.3.1. Theoretical background

Although efforts to encourage trainees' adoption of positive beliefs about exposure therapy may be successful, it is conceivable that this belief change will be only temporary (Petty & Wegener, 1998) and fail to produce lasting changes to therapist delivery of exposure. A consistent finding in the social persuasion literature is that attitude change is more durable when people are stimulated to think analytically about the persuasive material presented (Verplanken, 1991) and integrate it with their own responses to the persuasive information (e.g., Petty, Cacioppo, & Goldman, 1981). Indeed, when people argue for an adopted position in their own words, their belief in their own argument is strengthened, a finding referred to as the "saying-is-believing effect" (Higgins & Rholes, 1978). Aronson et al. (2002) demonstrated that having participants write letters to "pen pals" in attempts to convince them that intelligence is malleable and can be improved resulted in more durable endorsement of this belief.

The above findings on strengthening beliefs are consistent with literature demonstrating that attitudes grow more durable as a result of people defending their beliefs from others' challenges, a phenomenon known as attitude inoculation (Bernard, Maio, & Olson, 2003; Tormala & Petty, 2002). As negative beliefs about exposure therapy are highly prevalent (Deacon, Farrell, et al., 2013-this issue; Richard & Gloster, 2007), many exposure therapists may face mild "attacks" from non-exposure-using colleagues during their careers. To illustrate, one of us was recently told by a colleague that exposure therapy retraumatizes patients, traumatizes therapists, and has a much higher dropout rate than other treatments. Accordingly, training therapists to durably maintain positive beliefs about exposure should include exercises designed to stimulate trainees' independent endorsement of these positive beliefs and critiquing of misconceptions about exposure. Therapists should be encouraged to consider how they would refute hypothetical negative claims about exposure therapy concerning its perceived proclivity to cause harm, intolerability, and unethical nature.

5.3.2. Training strategies

A number of potential exercises provide opportunities for therapists to formulate both written and verbal defenses of positive beliefs about exposure therapy. It is recommended that these exercises any exercise of this nature be completed as a concluding activity near the end of exposure training following

the presentation of didactic material that accurately summarizes relevant science. The durability of positive exposure-related beliefs may be enhanced when trainees summarize their learning in their own words. For example, therapists may be given a list of criticisms (e.g., “Most patients cannot tolerate the anxiety evoked by exposure exercises”) hypothetically spoken by an anti-exposure colleague and are encouraged to formulate responses to address each criticism. Role-playing may be used in which a trainer acts as a dissenting colleague while the trainee therapist defends his or her positive views of exposure therapy. In addition, based on a technique used successfully by Aronson et al. (2002), therapists are encouraged to write letters to a hypothetical anxiety sufferer considering exposure therapy but reluctant to begin due to a number of concerns about the treatment’s safety, tolerability, and ethicality. The primary purpose of these concluding activities is to inoculate therapists’ newly developed positive views of exposure therapy against later slipping toward viewing the treatment in way that may lead to underutilization or suboptimal delivery.

6. Summary and future directions

There is a growing awareness in the literature that effective dissemination of exposure therapy for anxiety must include addressing a number of widely espoused concerns about the treatment’s safety, tolerability, and ethicality. At present, relatively few articles provide guidance for addressing these concerns, and the large majority of this guidance entails the presentation of research findings that refute negative beliefs about exposure. Although presenting empirical findings can be helpful (Farrell et al., 2013-this issue), additional training strategies and modes of presenting information inspired by research in social and cognitive psychology are predicted to augment current approaches to addressing therapist concerns about exposure.

Literature on dual-processing in reasoning makes a strong case for the use of experiential activities to facilitate associative pairing between exposure therapy and positive notions (e.g., safe, tolerable). Furthermore, research on how the need for cognition and the need for affect influence belief change necessitates the inclusion of affect-based information (e.g., case examples) to supplement empirical findings presented to therapists. Lastly, literature on attitude inoculation highlights the need to prepare therapists to defend positive beliefs about exposure therapy “in their own words” in order that these beliefs remain durable over time.

In our anecdotal observation, each of the theory-based suggestions reviewed above have been useful in promoting positive beliefs about and confidence in delivering exposure therapy among trainees. However, these suggestions remain speculative at this point, and future research should test these strategies to determine their efficacy in promoting therapist adoption of positive views of exposure. Specifically, we encourage exposure therapy trainers to implement the strategies outlined in this review and examine their impact via administering the Therapist Beliefs about Exposure Scale (Deacon, Farrell, et al., 2013-this issue) prior to and following training. This study design would allow for assessment of the effectiveness of the strategies that we have proposed. Additionally, although the beliefs modification strategies we have suggested could be studied in isolation, it would seem more ecologically valid to test them in conjunction with didactic training in the delivery of exposure. Previous research showed that didactic instruction alone in exposure delivery was successful in decreasing therapist negative beliefs about the treatment (Deacon, Farrell, et al., 2013-this issue), and future studies can determine whether one or more of our suggested strategies add incremental benefit in reducing concerns about exposure.

Also of interest to modifying therapist beliefs about exposure are findings that these beliefs vary as a function of several demographic characteristics, including gender, age, and degree obtained (Deacon, Farrell, et al., 2013-this issue). Future research should examine these demographic characteristics as potential moderating variables that may attenuate (or enhance) the extent to which concerns about exposure can be alleviated. Lastly, we encourage researchers to examine the hypothesized association between negative beliefs about exposure, overly cautious style of delivering this treatment, and attenuated patient outcomes. If research demonstrates that therapist reservations about exposure contribute to poor patient outcomes, strategies to modify therapist reservations about exposure should be considered a standard part of training in this approach. Overall, the potential modification of therapist negative beliefs about exposure therapy is a highly promising area for future study. Further research in this area may improve the dissemination of exposure therapy to practitioners, thereby increasing patient access to therapists able to competently deliver this highly effective treatment.

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