



## Predicting return of fear following exposure therapy with an implicit measure of attitudes

Michael W. Vasey\*, Casaundra N. Harbaugh, Adam G. Buffington, Christopher R. Jones, Russell H. Fazio

Department of Psychology, The Ohio State University, 1835 Neil Avenue, Columbus, OH 43210-1222, USA

### ARTICLE INFO

#### Article history:

Received 12 March 2012  
Received in revised form  
12 July 2012  
Accepted 23 August 2012

#### Keywords:

Exposure  
Return of fear  
Social phobia  
Fear of public speaking  
Implicit measures  
Attitudes

### ABSTRACT

We sought to advance understanding of the processes underlying the efficacy of exposure therapy and particularly the phenomenon of return of fear (ROF) following treatment by drawing on a social psychological view of phobias as attitudes. Specifically, a dual process theory of attitude-related behavior predicts that a positive response to exposure therapy may reflect change in either the automatic (the attitude representation itself) or controlled (skills and confidence at coping with the fear) responses to the phobic stimulus, or both. However, if the attitude representation remains negative following treatment, ROF should be more likely. We tested this hypothesis in a clinical sample of individuals with public speaking phobia using a single-session exposure therapy protocol previously shown to be efficacious but also associated with some ROF. Consistent with predictions, a post-treatment implicit measure of attitudes toward public speaking (the Personalized Implicit Association Test [PIAT]) predicted ROF at 1-month follow-up. These results suggest that change in the automatically activated attitude toward the phobic stimulus is an important goal of exposure therapy and that an implicit measure like the PIAT can provide a useful measure of such change by which to gauge the adequacy of exposure treatment and predict its long-term efficacy.

© 2012 Elsevier Ltd. All rights reserved.

After decades of research documenting the efficacy of exposure therapy for phobic anxiety disorders (Choy, Fyer, & Lipsitz, 2007), much about the technique remains inadequately understood (Moscovitch, Antony, & Swinson, 2009). This is perhaps no more clearly demonstrated than by the fact that it remains difficult to determine when gains achieved during treatment will persist or fade over time (Craske et al., 2008). Despite showing excellent reductions in fear in the context of therapy, many treatment responders will, eventually, experience some degree of “return of fear” (ROF; Rachman, 1989). ROF is defined simply as the reappearance of a fear that was previously present but had undergone a decline. Although ROF typically does not amount to full clinical relapse, it is a significant problem in a substantial percentage of cases and the phenomenon is not well understood (Craske & Mystkowski, 2006). In particular, predictors of ROF’s occurrence have proven elusive (e.g., see Craske et al., 2008).

Translational research drawing on advances in learning theory (see Craske, Hermans, & Vansteenwegen, 2006) and neuroscience (see McNally, 2007) has led to significant progress in understanding

of ROF. In our view, work drawing on advances in social psychology has similar promise. From a social cognitive perspective on attitudes (see Fazio, 2007), phobias are essentially inappropriately negative and highly accessible attitudes toward objects (e.g., spiders) or situations (e.g., public speaking). Because the basic science of attitudes and attitude-related behavior is well developed, it has considerable potential to advance understanding of the processes underlying the efficacy of exposure therapy and the durability of its effects. Specifically, we believe conceptualizing phobias from the perspective of a dual process theory of attitude-related behavior, such as the MODE model (Fazio, 1990; Olson & Fazio, 2009), can help to explain ROF’s occurrence.

The MODE model distinguishes two classes of attitude-to-behavior processes. The difference centers on the extent to which pursuing a particular course of action involves a spontaneous reaction to one’s perception of the immediate situation versus deliberation regarding the behavioral alternatives. Thus, MODE is an acronym for Motivation and Opportunity as DETERminants – determinants of whether attitude-related behavior is primarily spontaneous versus controlled in nature. The model postulates that attitudes can guide behavior in a spontaneous manner, without the individual actively considering the relevant attitude and without the individual’s necessary awareness of its influence. Instead, the

\* Corresponding author. Tel.: +1 614 292 2951; fax: +1 614 688 8261.  
E-mail address: [vasey.1@osu.edu](mailto:vasey.1@osu.edu) (M.W. Vasey).

attitude may be activated from memory automatically upon the individual's encountering the attitude object and influence how the person construes the object in the immediate situation. Ultimately, this construal will affect the person's behavioral response. Alternatively, attitudes may guide behavior through a more deliberative process. Individuals analyze the costs and benefits of a particular behavior and deliberately reflect upon the attitudes relevant to the behavioral decision so as to arrive at a behavior plan, which then may be enacted (see Ajzen, 1991). Given the effortful reflection required by the deliberative alternative, some motivating force is necessary to induce individuals to engage in such reasoning. The time and the resources to deliberate (i.e., the opportunity) also must exist.

In addition to delineating two distinct classes of attitude–behavior processes, the MODE model explicitly postulates the possibility of mixed processes that involve both automatic and controlled components. Any controlled component within a mixed sequence requires, once again, that the individual be both motivated to engage in the necessary effort and have the opportunity to do so. Thus, some individuals might be motivated to check on the appropriateness, or even counter the influence, of an automatically-activated attitude. That motivation might stem from an enhanced desire for accuracy, a sense of accountability, a concern with social desirability, or, as in research concerning racial prejudice, a motivation to control for prejudiced reactions. Within the MODE model, opportunity is essentially a gating mechanism. One must have the self-regulatory resources and the time for such motivated processing. Provided the opportunity exists, an individual can counter or even correct for the influence of the automatically-activated attitude. So, for example, in the domain of racial attitudes, evidence shows that some individuals are troubled by the activation of a negative racial attitude and, provided the opportunity exists, will work very hard to correct for that unwanted influence. However, if the individual is fatigued or cognitively taxed in some way, or if the situation demands an immediate response, there will be little opportunity to engage in motivated deliberation. In that case, judgments or behavior tend to be influenced by the automatically activated attitude, regardless of any motivational concerns (see Olson & Fazio, 2009, for a review).

In our view, the MODE model has important implications for understanding exposure therapy. As noted earlier, many individuals who exhibit improvement following treatment nonetheless experience ROF. The MODE model leads us to raise the question: what changed during treatment in such individuals – the automatic or the controlled component, or both? Did the individual's attitudinal representation of the feared object change, or just the individual's skills at controlling the automatically-activated fear? Although progress of the latter sort is certainly desirable, if the attitude remains intact, the negativity will continue to be activated whenever the feared object or situation is encountered. This may happen at a time when the individual is fatigued or in a context in which he/she believes him/herself incapable of effective control, in other words, when the opportunity for successful effortful control is lacking. Moreover, the very experience of anxiety and the efforts to regulate it have the potential to exacerbate any such fatigue and interfere with performance (Jones, Fazio, & Vasey, 2012). This may erode the individual's confidence regarding the management of the fear and foster avoidance and safety behaviors that promote relapse.

Interestingly, a similar implication can be derived from cognitive models that distinguish between the automatic and strategic processes that play a role in anxiety (e.g., Beck & Clark, 1997; Quimet, Gawronski, & Dozois, 2009). Like the MODE model, these information processing models point to the possibility of the automatic component exerting an especially dominant role when

the opportunity for strategic processing is lacking and, hence, imply that treatment must foster change in the automatic processes. As we have argued, however, the MODE model's grounding in the attitude literature highlights the significance of the attitudinal representation in memory and offers a clear prediction regarding the value of promoting change in the representation for limiting the potential for ROF and, importantly, of measuring the extent of such attitude change to predict its occurrence.

To summarize, the MODE model predicts that successful exposure therapy requires, not just the development of fear-management skills and the confidence that one can control the fear, but attitude change. Thus, what is needed is a way to measure the attitude representation of the phobic object following treatment. Drawing on findings from social psychology, a number of scholars have suggested that implicit measures of attitudes may prove useful in this regard (e.g., Hermans, Vansteenwegen, Crombez, Baeyens, & Eelen, 2002; Teachman & Woody, 2003).

Insofar as implicit measures tap the underlying attitude representation regarding the phobic stimulus, ROF should be likely when negative automatically activated attitudes toward the phobic stimulus persist following exposure therapy. In addition to such well-documented problems with self-reported assessments as their sensitivity to demand characteristics and social desirability concerns, people who have just undergone some treatment for an anxiety disorder may not be very good at reporting any success that they have achieved. They simply may not be very well-calibrated at estimating their improvement across time or the extent of their fear relative to what is normative. Consistent with this view, Craske et al. (2008) note that client judgments of their own competence during exposure therapy are not good predictors of actual competence at a later re-testing. Indeed, they suggest that the typical approach to exposure therapy (i.e., one involving massed training and constancy of training conditions) fosters illusions of competence. For all these reasons, the estimates of automatically-activated attitudes provided by an appropriately designed implicit measure should serve as valuable benchmarks of treatment progress.

A variety of evidence shows that implicit measures do indeed differentiate those with phobias from non-phobic controls (see Roefs et al., 2011). Importantly, such measures typically account for significant variance in behavioral approach task (BAT) performance above and beyond that accounted for by explicit measures (e.g., Asendorpf, Banse, & Mucke, 2002; Ellwart, Rinck, & Baker, 2006; Teachman & Woody, 2003; but see Huijding & de Jong, 2007). However, although some evidence suggests that implicit measures may be sensitive to change following exposure treatment (Gamer, Schmukle, Luka-Krausgrill, & Egloff, 2008; Teachman & Woody, 2003), such effects have not always been found (Huijding & de Jong, 2007, 2009; Teachman & Woody, 2003) and when found the effect is typically small and may reflect practice rather than treatment effects (see Roefs et al., 2011). Thus, it has been difficult to discern whether the treatment did not produce attitude change or the implicit measure was insensitive to such change. Moreover, the only study to test an implicit measure as a predictor of ROF failed to find a significant effect (Huijding & de Jong, 2009). In that case, however, it should be noted that the implicit measure also did not reveal significant change following treatment, likely limiting its ability to predict ROF.

Although the failure to find consistent evidence of exposure effects using implicit measures may simply reflect their absence, it may also reflect limitations of the specific measures used. For example, the attribute response labels (e.g., pleasant/unpleasant) used in the traditional form of the most widely employed implicit measure, the Implicit Association Test (IAT), have been shown to be problematic when the IAT is intended to measure attitudes. The traditional IAT involves sorting four categories of stimuli (e.g., a race

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات