Fear avoidance: subjective experience and behavioral decision-making

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Research problem and hypothesis:
Intuitively, fear and avoidance behaviors go hand in hand. Yet, paradoxically, felt emotions in general tend to be poor predictors of behavior (Baumeister et al., 2007; DeWall et al., 2016). A richer understanding of the relationship between subjective experiences of fear and avoidance behaviors may help resolve this apparent paradox. Consider that many human and non-human animal studies examining fear and avoidance behaviors often do so in avoidance learning tasks involving pain (e.g., electric shocks, thermal pain, pressure pain; Staubli, Huston, 1979; Rhudy, Meagher, 2003). These studies typically assume that fear of pain generalizes to different experiences of fear (e.g., fear of heights, social anxiety, fear of spiders). These studies also assume a relatively fixed, one-way relationship between the amount of fear people feel and avoidance behaviors.

In contrast, fear in everyday life is encountered across many different contexts and the amount of fear people experience may change when they choose to confront vs. avoid a threat. This disconnect between how fear and avoidance are examined in the laboratory and how they manifest in everyday life may account for the weak relationship between emotion and behavior. To better investigate the diverse and dynamic relationships between fear and behavior, our study examines subjective fear experiences and behavioral decisions to avoid one threat over another across different contexts (heights, social anxiety, spiders). We also investigate whether choosing to face a threat in one context (e.g., heights) over another (e.g., spiders) changes subjective experiences of fear to the chosen threat.

To do so, in our study we will have participants watch three kinds of threatening videos (heights, social threat, spiders). Participants will make ratings of these videos as a baseline measure. Next, participants will be asked to choose between two threatening videos (e.g., spiders vs. heights). They will be able to avoid one kind of threat (e.g., spiders) but face another (e.g., heights). Afterward, participants will rate the degree of fear they felt when watching the chosen video.

We predict that the relationship between fear and avoidance will differ depending on the type of threat. Moreover, participants may show individual differences such that some participants show a stronger relationship between fear and avoidance for heights, but a weaker relationship for spiders.

Although we expect that, in general, greater fear will lead to more avoidance, we also predict that actively choosing to face a threat could reduce the fear of that threat.

Methodology:

In the first part of this study, participants recruited on Amazon Mechanical Turk will complete a Qualtrics survey. To measure individual differences in fear to each of our three situations (heights, social, spiders), participants will complete three phobia inventories: the Acrophobia Questionnaire (Cohen, 1977), the Liebowitz Social Anxiety Scale (Liebowitz, 1987), and the Fear of Spiders Questionnaire (Szymanski & O'Donohue, 1995). Participants will also complete the 18-item Anxiety Sensitivity Index (ASI; Taylor et al., 2007) to measure individual differences in trait anxiety.

We will also measure participants' attitudes toward fear. Specifically, participants will indicate on a 0-100 continuous scale the extent to which they found fear pleasant or unpleasant, good or bad, and useful or useless. Participants will use the same scale to rate whether they liked or disliked fear, or and desired or didn't desire to feel fear. To obtain subjective fear measures of the video stimuli, we selected a medium intensity video of each topic (heights = 5.21, social anxiety= 2.50, spiders = 4.18) based on the highest 13 normative fear (ratings range: heights = 4.48-5.83, social anxiety = 1.87-4.96, spiders = 3.66-4.68) of each topic obtained in a current study in the lab from an independent sample (N=200). Participants were then shown these three 20 second videos as stimuli.

Participants will be given the choice to view one of two 20 second videos (e.g., a heights video vs. a spider video) in 18 pair choices of the three different stimuli topics (e.g., heights vs social fear, spiders vs social fear, heights vs spiders). After participants make their choice, they will see the selected video and indicate which of 9 emotions (anger, fear, disgust, sadness, happiness, excitement, calmness, neutralness, and surprise) they felt while watching the video. Once they chose and were shown the corresponding stimuli, participants will then be asked to rate how severely they felt each emotion they chose on a 5-point Likert scale (e.g., no fear, very mild fear, mild fear, moderate fear, and severe fear). Participants will then complete comprehension questions that consist of four still images each of the video categories. Participants will also be presented with three images that were not from any of the videos they saw to test whether they had viewed the videos.

Demographic information will then be obtained (e.g., age, gender, ethnicity, race). The participants will then be shown the debriefing page describing the study and its intentions more in depth, as well as contact information for the lab, Principal Investigator, and the National Crisis Hotline.

Results:
We are currently in the data collection process, which is not yet complete. We aim for a target N=30.

Implications:
Together, the results of the proposed study and the follow up study have the potential to offer a richer and more nuanced understanding of the relationship between fear experience and

avoidance behavior. In turn, this understanding may lend insight into when experiences of emotion will and will not correspond to behavior.