ORIGINAL ARTICLE

Journal of Theoretical Social Psychology

WILEY

Personal meaning as a predictor of behavioral action over and above the role of state social anxiety

Carol S. Lee^{1,2} Sarah A. Hayes-Skelton²

¹Department of Psychology, Nevada State College, Henderson, NV, USA

²Department of Psychology, University of Massachusetts Boston, Boston, MA, USA

Correspondence

Carol S. Lee, Department of Psychology, Nevada State College, 1300 Nevada State Dr., Henderson, NV 89002, USA. Email: carol.lee@nsc.edu

Abstract

The present experiment investigated the personal meaning of a behavior and state social anxiety as predictors of behavioral action. Participants (N = 68) were given the chance to take the behavioral action of recording a statement for a video blog. Participants were randomized to personal meaning (n = 34; assigned to speak on thesocial issue most important to them and completed a personal meaning enhancement writing task) or control (n = 34; assigned to speak on the social issue least important to them and completed a control writing task) conditions. The results indicated that having personal meaning in a behavior significantly predicted the behavioral action. The findings suggest that having personal meaning in a social anxiety-provoking behavior can increase the likelihood of that behavior. Clinical implications and limitations of the study are also discussed.

1 | INTRODUCTION

Current models of human social behavior highlight several predictors of actively engaging in a social behavior, such as the perceived social norms of, self-efficacy about, and personal meaning of enacting the social behavior. Here, human social behavior is defined as any behavior occurring in social situations that is influenced by the real or imagined presence or expectations of others (e.g., giving a speech; Baron et al., 1989). However, the literature largely excludes the role of state social anxiety about a specific social behavior (Ajzen, 1985; Eccles et al., 1983; Rimal, 2001; Witte, 1992).

There is good reason to account for state social anxiety when considering the predictors of social behaviors. For example, a substantial body of literature indicates that even state levels of anxiety influence behavior (Ekman et al., 1983; Izard, 1994; Lang et al., 2000). Furthermore, models of Social Anxiety Disorder (SAD; Hofmann, 2007) indicate that both state social anxiety (context- and state-dependent anxiety in social situations) and SAD (clinically significant anxiety in social situations resulting in significant distress and impairment) influence decisions to actively engage with (behavioral action) or avoid (behavioral avoidance) social behaviors. Here, behavioral avoidance and action, as well as their associated cognitive factors, are conceptualized as existing on a spectrum, with

avoidance and action on opposite ends (Lee & Hayes-Skelton, 2017; Rimal, 2001; Witte, 1992). However, despite the broad literature on predictors of behavioral avoidance (e.g., negative filter, cost and probability biases, and attentional biases), there is surprisingly little on the predictors of behavioral action, the active engagement of a behavior despite any fear, or anxiety associated with that behavior. Such a distinction is necessary when considering that, while many predictors of behavioral avoidance can be applied to behavioral action (e.g., self-efficacy and fear of failure), some predictors of behavioral action may not be associated with avoidance (e.g., need for achievement; Elliot & Church, 1997; Neff et al., 2005; Zusho et al., 2005).

One potential predictor of behavioral action may be the personal meaning or perceived value of a behavior, as evidenced by the large body of literature already providing evidence for personal meaning as a predictor of human social behavior. For example, the Theory of Planned Behavior (TPB: Ajzen, 1985, 1991, 2011), posits that behavioral beliefs, which refer to an individual's attitudes toward a behavior, including the degree to which individuals believe themselves to like or dislike the behavior, value the behavior, or believe the behavior to have favorable or unfavorable outcomes, increases the likelihood of that behavior (Ajzen, 1985, 1991, 2011). Studies examining the TPB have also noted that behavioral beliefs are one of the strongest predictors of a behavior (Ajzen, 1991; Dawson et al., 2015; Pickett et al., 2012). However, the literature here neither examines social behaviors in the context of state social anxiety, nor examines the impact of anxiety on an anxiety-producing behavior. As such, lacking still is any evidence for personal meaning as a predictor of an anxiety-producing behavior (behavioral action).

Other bodies of literature on personal meaning, such as the literature on subjective task values and values affirmation exercises, similarly indicate that personal meaning predicts the engagement of human social behaviors. For example, the subjective task values literature indicates that having a strong self-reported personal meaning attached to activities such as playing sports (Cox & Whaley, 2004; Eccles & Harold, 1991; Stuart, 2003; Wigfield et al., 1997) or music (Eccles et al., 1993; Wigfield et al., 1997) is associated with an increased likelihood of engagement in those activities. Similarly, the values affirmation literature indicates that writing about values increases a wide range of behaviors from reducing the achievement gaps and increasing the academic performance (e.g., Jordt et al., 2017; Layous et al., 2017; Miyake et al., 2010), to increasing pro-social behaviors (Lindsay & Crewell, 2014). However, lacking still is the examination of personal meaning in the context of social anxiety-producing social behaviors. In effect, while the social psychology literature establishes a link between personal meaning and social behaviors, it does not adequately account for the role of anxiety and anxiety-producing behaviors (behavioral action).

While the personal meaning of a behavior has yet to be studied in the context of social anxiety, similar constructs such as values clarification, the process of identifying what is personally meaningful, and valued action, actions that are personally meaningful, have been reviewed in this context (Hayes et al., 2004; Orsillo et al., 2016; Roemer & Orsillo, 2009). Of note, values clarification, valued action, and personal meaning are closely related. However, personal meaning refers to what is personally meaningful or valued about a specific behavior (Eccles et al., 1983), whereas values clarification more generally refers to the process of finding what is personally meaningful, and valued action refers to a specific behavior previously identified as being personally valued (Hayes et al., 2011). That is, in order to identify an action as a valued action, the action must be personally meaningful. Because both personal meaning and valued action are so closely tied and both refer to a specific behavior, the present paper refers to the literature on valued action as it relates to personal meaning of a behavior.

In the context of social anxiety, personal meaning of a behavior has been associated with an increased likelihood of that behavior occurring and decreased self-reported social anxiety (Bilich & Ciarrochi, 2009; Dalrymple & Herbert, 2007; Kashdan & McKnight, 2013; Ossman et al., 2006). Here, the literature generally indicates that behavioral action is positively associated with personal meaning and negatively associated with social anxiety. However, the majority of the studies here examined valued action and personal meaning in the context of acceptance-based behavioral therapies (ABBTs) such as ACT (Bilich & Ciarrochi, 2009; Block, 2002; Dalrymple & Herbert, 2007; Ossman et al., 2006). As such, they do not examine the unique effect of the personal meaning of a behavior on that behavior's occurrence, over and above other components of ABBTs, such as acceptance of distress. Additionally, the research here examines the levels of social anxiety in general, rather than the amount of anxiety about a particular behavior. Such a distinction is important when considering that experiencing higher levels of social anxiety do not necessarily indicate that individuals will experience greater state anxiety in all social situations. As a result, despite the models of social behavior and social anxiety noting the importance of personal meaning as an important predictor of social behavior in the context of state social anxiety, the literature does not examine the unique effect of personal meaning on behavioral action (the active engagement of a behavior despite anxiety).

The present study investigated personal meaning and state social anxiety as predictors of behavioral action. Previous research indicates that both personal meaning and state social anxiety are general predictors of social behavior. However, the literature has not examined them together as predictors of *behavioral action*. We examined this experimentally by implementing a between-subjects design, in which half of the participants were primed to have greater personal meaning in taking the social anxiety-provoking behavioral action of recording a position statement about a current social issue to be posted on a video blog. We hypothesized that, when examined together, personal meaning and state social anxiety would independently predict the behavioral action.

2 | MATERIALS AND METHODS

2.1 | Participants

We recruited 145 participants from an urban university. All participants provided informed consent. The first part of the study was an online screener, which was used to assess eligibility. The second part of the study was an experimental manipulation completed in the lab. Of the 145 participants completing the online screener, 71 participants were interested in completing part two of the study. Inclusion criteria for this study included English proficiency, for which participants indicated that they experienced sufficient proficiency to record a video statement about current social issues. Exclusion criteria for this study included history of an Autism Spectrum Disorder or Psychotic Disorder, and extensive public speaking experience (frequency of more than once a week) in the past month. The inclusion criteria of speaking English proficiency resulted in three individuals being dropped from the analysis. All individuals completed at least 80% of the items on 80% of the measures. The final sample consisted of 68 participants. The demographic characteristics of our final sample can be seen in Table 1. Of note, the mean Social Phobia Inventory (SPIN; Connor et al., 2000) scores of our sample indicated that our sample was above the clinical cut-off for social anxiety. However, as would be expected from this nonclinical sample, the mean (22.08) is lower than that of most clinical samples (means = 30-46; Connor et al., 2000).

-WILEY 3 Journal of Theoretical Social Psychology

TABLE 1	Demographic characteristics
of participa	nts

	Personal meaning group	Control group	total	
	(n = 34)	(n = 34)	(n = 68)	
	n (%)	n (%)	n (%)	
Mean SPIN (SD)	22.78 (12.39)	21.39 (15.72)	22.08 (14.06)	
SPIN range	2-55	0-57	0-57	
SPIN score above clinical cut-off (%)	20 (58.82)	19 (55.8)	39 (57.35)	
Gender (%) ^a				
Male	9 (26.47)	9 (26.47)	18 (26.47)	
Female	25 (73.53)	25 (73.53)	50 (73.53)	
Mean age (SD)	22.91 (5.38)	20.62 (5.27)	22.49 (5.78)	
Sexual orientation (%)				
Gay/Lesbian	1 (2.94)	2 (5.88)	3 (4.41)	
Bisexual	7 (20.58)	3 (8.82)	10 (14.71)	
Heterosexual	26 (76.47)	27 (79.41)	53 (77.94)	
Pansexual	1 (2.94)	1 (2.94)	2 (2.94)	
Racial identity (%) ^{b, c}				
Alaskan native	0	0	0	
Asian	5 (14.71)	9 (26.47)	14 (20.58)	
Black	9 (26.47)	8 (23.53)	17 (25.0)	
Latino/Hispanic	7 (20.59)	5 (14.71)	12 (17.64)	
Pacific Islander	0	2 (5.88)	2 (2.94)	
White	13 (38.24)	10 (29.41)	24 (35.29)	
Multiracial/Other	1 (2.94)	5 (14.71)	6 (8.88)	

Note: SPIN: Social Phobia Inventory, clinical cut-off score = 19.

^aAll participants identified as cisgender.

^bParticipants checked as many racial identities as they considered to be part of their identity. ^cOther identities endorsed: Arab, Black and White, Black and Asian, Malaysian and Other, Brazilian, Brazilian American, Haitian, Indian, and Middle Eastern.

2.2 | Assessment measures

2.2.1 | Demographics questionnaire (Suyemoto et al., 2016)

Participants completed the demographic questionnaire as a part of the online survey. As a part of the questionnaire, we also asked individuals if they have ever been diagnosed with an Autism Spectrum Disorder (ASD) or psychotic disorder, as symptoms of these disorders can influence the social engagement or perceptions (White et al., 2007). Additionally, we asked individuals to describe their public speaking experience, as extensive public speaking experience would likely affect engagement with the study's proposed behavioral action of recording a position statement.

2.2.2 | Social phobia inventory (SPIN: Connor et al., 2000)

The SPIN is a 17-item self-report measure evaluating fear and avoidance in social situations. Higher scores indicated higher social anxiety. Based on an ROC analysis, individuals with scores over 19 are likely to experience social anxiety at the disorder level (Connor et al., 2000). Participants in our sample completed the SPIN as a measure of social anxiety at the beginning of the experimental portion of the experiment. The SPIN has been shown to have good testretest reliability, internal consistency ($\alpha = .94$), and good convergent and discriminant validity (Connor et al., 2000). Similarly, the SPIN in our sample displayed excellent internal consistency ($\alpha = .93$).

2.2.3 | Depression, anxiety, and stress scales-Depression subscale, 7-item version (DASS-D; Lovibond & Lovibond, 1995)

This 7-item self-report measure was used to measure the symptoms of depression. Respondents rated how much each item applied to them, on a scale from 0 to 3. We used the depression subscale of the DASS to control for participants' depression, as depression can influence social engagement and perception. The DASS-D has been shown to have good convergent and discriminant validity and

excellent internal consistency (α = .91–.97; Brown et al., 1997). The DASS-D in our sample displayed good internal consistency (α = .89).

2.2.4 | Social issues values questionnaire

The social issues values questionnaire (SIVQ) was designed for the present study and was adapted from the Valued Living Questionnaire (VLQ: Wilson et al., 2010). The self-report measure asked participants to rate the importance of and the personal meaning of recording a position statement for a video blog about six different social issues (expanding slot machine gaming, equal pay for all genders, lowering the student loan interest rate, legalization, regulation, taxation of marijuana, honeybee decline, and health care access and reform), regardless of whether they are for or against the issue. The measure also asked participants to rate how likely they were to record a position statement about each social issue. Participants answered each question using a 1 (not at all) to 10 (extremely) Likert-type scale, taken from the VLQ. Participants were also asked to mark the social issue that they found to be the most important and the social issue that they found to be the least important. We administered the SIVQ to assess how much participants valued each social issue and how personally meaningful they found recording a statement about each issue for a video blog. The SIVQ in our sample displayed adequate to good internal consistency for the item assessing how personally meaningful they found recording a statement about each issue for a video blog (α 's from .77 to .86).

2.2.5 | State-trait anxiety inventory 6–State subscale (STAI-6S; Marteau & Bekker, 1992)

The STAI-6S is a 6-item version of the State-Trait Anxiety Inventory (Spielberger et al., 1970) and is a self-report measure measuring the intensity of feelings of state anxiety. Participants rated how much they were currently experiencing each item on a 1 to 4 Likert scale. The STAI-6S has been shown to have good internal consistency (α = .90), reliability, and convergent validity (Marteau & Bekker, 1992). The STAI-6S in our sample displayed good internal consistency (α = .81). Participants were instructed to complete the STAI-6S while thinking about the social situation of recording a position statement on their assigned social issue for a video blog. The original 20-item STAI has been used as a measure of state social anxiety successfully (Mellings & Alden, 2000). In our sample, the STAI-6S was significantly related to our trait measure of social anxiety, the SPIN (r = .42, p < .001).

2.2.6 | Behavioral action

In the present study, participants were given 5 min to record a position statement on their assigned social issue via an iPad. Participants were told that the statement could be any length, and that if they chose not to record, they should "just sit for the next 5 min." Participants were then left alone for 5 min. Participants were considered to have taken the behavioral action if they record a position statement of any length. Participants were not able to delete and re-record position statements.

2.3 | Design and procedure

The study design was a two-part between-subjects experiment. In the first part of the experiment, participants were asked to fill out the demographics questionnaire, SPIN, DASS-D, and SIVQ. Part one took approximately 20 min and was completed online. Part two occurred 1–7 days following part one.

Part two consisted of a 45-min experiment in the lab. Here, we randomly assigned participants to be in the personal meaning or the control condition. To enhance their personal meaning, those in the personal meaning condition were assigned to speak on the social issue that was most important to them (rated as a 7 or higher on the SIVQ). Conversely, those in the control condition were assigned the social issue that was least important to them (rated 4 or lower on the SIVQ).

All participants were informed of their assigned social issue and told that they would later have the option to record a position statement about their assigned social issue for "a video blog about individuals' voices on different social issues." Participants were then asked to complete the DASS-S and the STAI-6S, which instructed participants to assess their state anxiety while thinking about recording the position statement about their assigned social issue.

After completing the measures, all participants had 5 min to write and prepare what they would say if they were to record a position statement on the assigned social issue. Participants in the personal meaning condition then completed a 7-min writing task reflecting on how and why it would be personally meaningful for them to record a position statement about their assigned social issue. To control for a practice effect, participants were explicitly instructed to not write about the social issue, but rather the action of recording the position statement. The written product of this task was checked for adherence; all participants adhered to the writing task prompt. The writing task was adapted from two values-based writing tasks (Hulleman et al., 2008; Roemer & Orsillo, 2009). Studies indicate that when writing about how and why something is important, individuals subsequently find the topic to be more important than when writing about a neutral topic (Hulleman et al., 2008; Hulleman & Harackiewicz, 2009). In the control condition, participants were asked to complete a 7-min writing task describing the contents of their room in as much detail as possible. In both conditions, participants were asked to be as thorough as possible and to write for the entire 7 min. Participants then completed the SIVQ.

We then gave participants the option to record a position statement on an iPad about their assigned social issue. After demonstrating the use of the iPad, the experimenter told the participant that they would be back in 5 min, during which the participant could

TABLE 2 Preliminary analyses

	Personal meaning group	Control group	Total	ANOVA	ANOVA (N = 68)	
	M (SD)	M (SD)	M (SD)	(N = 68)		
Measures	(n = 34)	(n = 34)	(N = 68)	F	р	
SPIN	22.78 (12.39)	21.39 (15.72)	22.08 (14.06)	0.16	.69	
STAI-6S	13.03 (4.34)	12.68 (4.06)	12.85 (4.17)	0.12	.73	
DASS-D	3.68 (4.33)	4.94 (5.19)	4.31 (4.79)	1.19	.28	
Length of position statement	143.07 (86.93)	53.33 (21.50)	128.11 (86.38)	3.02	.10	
in seconds	Range = 28 s-299 s	Range = 35 s-77 s	Range = 28 s-299 s			
Personal meaning	8.94 (1.92)	2.29 (2.14)	5.62 (3.91)	181.63	<.001	
Percent of participants taking	44.12	8.82	26.45	$\chi^2 (N = 68)$		
behavioral action				χ^2	р	
				10.88	<.001	

Note: SPIN: Social Phobia Inventory (clinical cut-off = 19), STAI-6S: State Trait Inventory-6-item State subscale, DASS-D: Depression Anxiety Stress Scales-Depression subscale, M-SESS: Modified Self-Efficacy for Social Situations Scale, Behavioral Action: Whether or not participant recorded a position statement, Personal Meaning: Amount of personal meaning reported to record a statement on the social issues values questionnaire.

record their position statement if they so choose. After 5 min, the experimenter returned, and the participant completed the STAI-6S and SIVQ. The experimenter debriefed the participant and informed participants that any recorded position statements of the study would not be posted or used outside of the study. All experimental procedures were standardized and manualized, and each experimenter was trained on the procedures,

2.4 Data analysis

For our preliminary analyses, we conducted a series of omnibus chi-square analyses to examine differences in the STAI-6S, personal meaning group assignment, and behavioral action by age, race, gender, sexual orientation, public speaking experience, and experimenter. Additionally, we conducted an adjusted standardized residuals analysis to compare differences between groups of significant omnibus chi-square analysis (Agresti, 2007; Delucchi, 1993; MacDonald & Gardner, 2000; Sharpe, 2015). Adjusted standardized residuals greater than the absolute value of ± 2 are considered to be significant (MacDonald & Gardner, 2000; Sharpe, 2015).

For our analyses, our main variables were state social anxiety (STAI-6S), personal meaning group assignment, and depression (DASS-D) taken before participants were given the chance to take the behavioral action of recording a position statement. Behavioral action was measured by whether or not participants recorded a position statement.

The primary analyses consisted of a series of logistic regressions in SPSS Version 23. Due to the significant association between the DASS-D and the STAI-6S, and the significant difference in behavioral action by race, we entered the DASS-D and race into the model as covariates in our logistic regression models. Race was dichotomized in to Black (n = 17) and not Black (n = 51) because our adjusted standardized residuals analysis indicated that only participants identifying as Black were significantly more likely than other racial groups to take the behavioral action.

3 | RESULTS

3.1 **Preliminary analyses**

Table 2 provides the mean, ranges, and standard deviations of all measures used in the analyses. Since the DASS-D had a relatively high skewness value, we ran our analysis both with and without the transformed DASS-D value (square root transformation). Because the pattern of the results did not change with and without the transformed value, the current study used the untransformed value for ease of interpretability. All other skewness and kurtosis values were within acceptable ranges. The scores on the SPIN, STAI-6S, and DASS-D did not differ significantly between groups (ps = .28-.73). Additionally, the proportion of individuals with SPIN scores above the clinical cut-off did not differ between groups. In contrast, whether participants took the behavioral action significantly differed between groups, in that individuals in the personal meaning condition were more likely to record the position statement than those in the control condition (χ^2 (1, N = 68) = 10.88, p < .001). Finally, participants in the personal meaning condition did not record significantly longer position statements than those in the control condition (F(1, 16) = 3.02, p = .10).

The social issues rated the most and least personally meaningful to record a position statement about did not differ between groups $(\chi^2 (4, N = 68) = 4.50, p = .21; \chi^2 (3, N = 68) = 2.64, p = .62)$. Across conditions, the majority of participants rated health care access and reform (Control: 45.6%; Personal Meaning: 52.9%) as being the social issue most personally meaningful. Participants rated expanding slot machine gambling (Control: 67.6%; Personal Meaning: 70.6%) as being the least personally meaningful. The social issues rated most and least personally meaningful did not differ by race (χ^2 (18) = 22.01, p = .23; χ^2 (24) = 17.62, p = .82).

As expected, a correlation matrix revealed that the STAI-6S and behavioral action were significantly related to the DASS-D (ps < .05; See Table 3). Surprisingly, all other variables were not significantly related to one another (ps = .23-.88; see Table 3). Additionally, we examined STAI-6S, personal meaning group assignment, and behavioral action by age, race, gender, sexual orientation, public speaking experience, and experimenter, using a series of omnibus chi-square analyses. Our preliminary analyses revealed a significant difference on behavioral action (whether or not participants record a position statement) by race (χ^2 (6, N = 68) = 16.00, p = .01, Cramer's V = .49). To examine the differences in behavioral action by each racial group. we conducted an adjusted standardized residuals analysis. Our adjusted standardized residuals analyses indicated that participants identifying as Black (adjusted standardized residual = 3.8) were significantly more likely to take the behavioral action of recording a position statement than participants identifying as White, Asian, Latino, Pacific Islander, or Multiracial (adjusted standardized residuals = -1.0, -1.6, -0.9, -0.6, and 0.1, respectively). There were no other significant differences between any of the other variables (ps = .10 - .67).

3.2 | Main analyses

To test the hypothesis that state social anxiety and personal meaning would predict behavioral action, we conducted a logistic regression with STAI-6S and personal meaning condition predicting behavioral action (whether or not participants recorded a position statement) (see Table 4). The logistic regression model was statistically significant (χ^2 (4) = 28.63, p < .001), explaining 50.00% (*Nagelkerke* $R^2 = .50$) of the variance in behavioral action. With all variables in the model, our covariate of race (Black vs. not Black) was significantly associated with an increased likelihood of behavioral action (*Wald Criterion* = 9.73, p < .01). Additionally, the odds ratio indicated that for individuals identifying as Black, the behavioral action was 18.98 more times likely (*Exp*(*B*) = 18.98). Similarly, personal meaning was

significantly associated with an increased likelihood of behavioral action (*Wald Criterion* = 9.00, p = .001). Additionally, for individuals in the personal meaning group, the behavioral action was 17.58 more times likely (*Exp*(*B*) = 17.58). In contrast, the STAI-6S was not significantly associated with behavioral action (*Wald Criterion* = 2.85, p = .09). Overall, 83.8% of cases were correctly classified, which significantly improved upon a chance rate of 26.5% (z = 5.47, p < .001). The predictor variables correctly classified 50.00% of participants taking the behavioral action and 96.00% of participants not taking the behavioral action, both of which were significant improvements over the chance rate of 26.5% (z = 2.26, p < .05; z = 6.60, p < .001, respectively). Thus, our hypothesis was partially supported in that personal meaning, but not state social anxiety, predicted behavioral action.

4 | DISCUSSION

Although previous research indicates that personal meaning is an important predictor of social behavior, the literature has not examined personal meaning as a predictor of behavior despite anxiety (behavioral action) or in the context of state social anxiety. Thus, in the present study, we examined state social anxiety and personal meaning as predictors of behavioral action. Additionally, due to the significant association between the DASS-D and the STAI-6s, and the significant difference in behavioral action by race (Black vs. not Black), we controlled for both depression and race.

The results indicated that, controlling for depression symptoms and the race of the participant, personal meaning, but not state social anxiety, significantly predicted if participants took the behavioral action of recording the position statement. In other words, it is possible that personal meaning in an anxiety-provoking behavior increases the likelihood of engaging in that behavior, despite any fear or anxiety. This finding is consistent with the literature indicating that personal meaning predicts social behavior, as well as expands our theoretical understanding of personal meaning to a predictor of behavioral action. Such findings could have valuable implications for individuals working to manage their social anxiety, as they suggest

Measures	SPIN	STAI-6S	DASS-D	Personal meaning	Behavioral action
SPIN	-	.39**	.51**	.05	05
STAI-6S	-	-	.34*	.04	16
DASS-D	-	-	-	13	02
Personal meaning	-	-	-	-	.40****
Behavioral action	-	-	-	-	-

TABLE 3 Correlations

Note: SPIN: Social Phobia Inventory, STAI-6S: State Trait Inventory–6-item State subscale, DASS-D: Depression Anxiety Stress Scales–Depression subscale, Behavioral Action: Whether or not participant recorded a position statement.

p < .05; p < .01; p = .001.

TABLE 4	State social anxiety an	d personal meaning as prec	ictors of behaviora	l action when con	trolling for a	depression and race
---------	-------------------------	----------------------------	---------------------	-------------------	----------------	---------------------

Predictors	χ ²	df	Nagelkerke R ²	р	B (SE)	Wald	Exp(<i>B</i>) [95% CI]	р
	28.63	4	.50	<.001				
DASS-D					.12 (0.09)	1.96	1.13 [0.95, 1.34]	.16
Black racial identity					2.90 (0.94)	9.73	18.98 [2.99, 120.64]	.002
STAI-6S					-0.16 (0.10)	2.85	0.85 [0.70, 1.02]	.09
Personal meaning					2.87 (0.96)	9.00	17.58 [2.70, 114.42]	.003

Note: DASS-D: Depression Anxiety Stress Scales-Depression subscale, STAI-6S: State Trait Inventory-6-item State subscale.

that it is possible to engage in anxiety-provoking behaviors despite any state social anxiety associated with that behavior. Strikingly, because neither trait nor state social anxiety differed between conditions, the results may also suggest that one can engage in social anxiety-provoking behaviors without first decreasing their social anxiety. However, because we assigned participants in the personal meaning condition the social issue they rated as being most meaningful, and participants in the control condition the social issues they rated as being the least meaningful, we cannot assess the impact of personal meaning when paired with a behavior related to an issue of low importance. To do so, further study should examine the magnitude of the effect by assigning participants a social issue of equal importance.

In contrast to our hypothesis, the results indicated that, controlling for depression symptoms and the race of the participant, state social anxiety did not significantly predict if participants took the behavioral action of recording the position statement. The findings here indicate that personal meaning predicted behavioral action over and above state social anxiety. The nonsignificant effect of state social anxiety may have been the result of a difference in how social anxiety was measured, as well as our use of a nonselected sample. For example, social anxiety is typically measured and examined as a general emotional state, across social situations. In contrast, in keeping with the philosophy of the TPB (Ajzen, 1985), which indicates that predictors must be examined in the context of the specific behavior, our study aimed to establish the effect of participants' state social anxiety about a specific social anxiety-provoking behavior. Thus, it may be that, in contrast to general levels of social anxiety, this level of specificity does not have a direct effect on behavioral action. Additionally, to examine state social anxiety, we adapted the STAI-6S, which is a measure of general state anxiety. As such, it is possible that, despite our modifications, the measure did not accurately capture participants' state social anxiety. Furthermore, it may be that the state social anxiety only has a direct effect on behavioral action in individuals with clinically significant anxiety, which only described 57.35% of our sample. Thus, our lack of significant findings here may be due to using a nonclinical sample. To address this limitation, further research should examine the differences in the direct effects of general social anxiety across situations, state social anxiety in high anxiety or clinical samples, and state social anxiety about a specific behavior on behavioral action. However, despite the limitations, the results may also indicate that personal meaning predicts

behavioral action above and beyond state social anxiety, providing further evidence that it is possible to engage in anxiety-provoking behaviors despite any state social anxiety associated with that behavior or without first decreasing their anxiety about that behavior.

Other limitations existed in the present study. For example, research assistants were not blind to the condition participants were randomized into. As such, they could have inadvertently influenced participants while instructing participants on the use of the iPad; however, we attempted to reduce this bias using scripts for the research assistants. Our odds ratio and confidence intervals for personal meaning were also quite large, indicating a large variance. To manage this, future studies could utilize a simpler model or increase sample size. Additionally, in each of our models, race had a significant effect on behavioral action, in that participants racially identifying as Black were more likely to take the behavioral action. The finding is striking and worth further exploring to understand why the effect exists. For example, it may be that, for individuals who hold marginalized identities and, thus, face greater systemic oppression than those holding non-marginalized identities (Fiske et al., 1998; Sue et al., 2009), there is greater personal meaning in engaging with social issues, as well as a greater psychological cost to choosing not to engage with them. Additionally, given the political nature of our study, our findings may reflect the tendency of individuals holding marginalized identities to develop a sociopolitical awareness that motivates them to take action in response to social injustice, due to a greater awareness of the personal and societal implications of not speaking out (Watts et al., 2003). Although it is unclear why the effect exists in our sample, the findings point to the importance of considering cultural factors in our conceptualization of behavior.

In sum, the findings here indicate that having personal meaning for recording the position statement increased the likelihood of participants recording the statement. The findings, should they generalize to other behaviors, may indicate that personal meaning in a behavior leads to greater engagement in anxiety-provoking behaviors. These findings have implications for individuals managing social anxiety, as they suggest personal meaning in a behavior as a method of increasing engagement in social anxiety-provoking behaviors, despite any social anxiety associated with that behavior. Further study should test the model in other anxiety-provoking behaviors and in clinical samples to fully assess its generalizability and its utility in the context of treatment. Should the findings generalize to other behaviors, the findings -WILEY- Journal of Theoretical Social Psychology

may indicate that individuals can increase the likelihood of engaging in an anxiety-provoking behavior by personal meaning in that behavior to successfully enact the behavior.

INFORMED CONSENT

Informed consent was obtained from all individual participants included in the study.

CONFLICT OF INTEREST

On behalf of all authors, the corresponding author states that there is no conflict of interest.

ETHICAL APPROVAL

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

PEER REVIEW

The peer review history for this article is available at https://publo ns.com/publon/10.1002/jts5.81.

DATA AVAILABILITY STATEMENT

All data and materials used in this study are available on request from the corresponding author.

ORCID

Carol S. Lee D https://orcid.org/0000-0002-6909-6157

REFERENCES

- Agresti, A. (2007). An introduction to categorical data analysis. Wiley.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), Action-control: From cognition to behavior (pp. 11–39). Springer.
- Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50, 179–211. https://doi. org/10.1016/0749-5978(91)90020-T
- Ajzen, I. (2011). The theory of planned behavior: Reactions and reflections. Psychology & Health, 26(9), 1113–1127.
- Baron, R. A., Byrne, D., & Suls, J. (1989). *Exploring social psychology*. Allyn & Bacon.
- Bilich, L. L., & Ciarrochi, J. (2009). Promoting social intelligence using the experiential role-play method. In J. T. Blackledge, J. Ciarrochi, F. P. Deane, J. T. Blackledge, J. Ciarrochi, & F. P. Deane (Eds.), Acceptance and commitment therapy: Contemporary theory, research and practice (pp. 247–262). Australian Academic Press.
- Block, J. A. (2002). Acceptance or change of private experiences: A comparative analysis in college students with public speaking anxiety. Doctoral dissertation, University at Albany, State University of New York.
- Brown, T. A., Chorpita, B. F., Korotitscw, W., & Barlow, D. H. (1997). Psychometric properties of the depression anxiety stress scales (dass) in clinical samples. *Behaviour Research and Therapy*, 35(1), 79– 89. https://doi.org/10.1016/S0005-7967(96)00068-X
- Connor, K. M., Davidson, J. R. T., Churchill, L. E., Sherwood, A., Weisler, R. H., & Foa, E. (2000). Psychometric properties of the Social Phobia Inventory (SPIN): New self-rating scale. *The British Journal of Psychiatry*, 176(4), 379–386. https://doi.org/10.1192/bjp.176.4.379

- Cox, A. E., & Whaley, D. E. (2004). The influence of task value, expectancies for success, and identity on athletes' achievement behaviors. *Journal of Applied Sport Psychology*, 16(2), 103–117. https://doi. org/10.1080/10413200490437930
- Dalrymple, K. L., & Herbert, J. (2007). Acceptance and commitment therapy for generalized social anxiety disorder. *Behavior Modification*, 31(5), 543–568. https://doi.org/10.1177/0145445507302037
- Dawson, L., Mullan, B., & Sainsbury, K. (2015). Using the theory of planned behaviour to measure motivation for recovery in anorexia nervosa. *Appetite*, 84, 309–315. https://doi.org/10.1016/j.appet.2014.10.028
- Delucchi, K. L. (1993). On the use and misuse of chi-square. In G. Keren & C. Lewis (Eds.), A handbook for data analysis in the behavioral sciences (pp. 294–319). Lawrence Erlbaum.
- Eccles, J., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), Achievement and achievement motivation (pp. 75–146). Freeman.
- Eccles, J., & Harold, R. (1991). Gender differences in sport involvement: Applying the eccles' expectancy-value model. *Journal of Applied Sport Psychology*, 3(March), 7–35. https://doi.org/10.1080/10413 209108406432
- Eccles, J., Wigfield, A., Harold, R. D., & Blumenfeld, P. (1993). Age and gender differences in children's self- and task perceptions during elementary school. *Child Development*, 64(3), 830–847. https://doi. org/10.2307/1131221
- Ekman, P., Levenson, R., & Friesen, W. (1983). Autonomic nervous system activity distinguishes among emotions. *Science*, 221, 1208–1210. https://doi.org/10.1126/science.6612338
- Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation.. Journal of Personality and Social Psychology, 72(1), 218–232. https://doi. org/10.1037/0022-3514.72.1.218
- Fiske, A., Kitayama, S., Markus, H. R., & Nisbett, R. E. (1998). The cultural matrix of social psychology. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, 4th ed., pp. 915–981). : McGraw-Hill.
- Hayes, S. C., Follette, V. M., & Linehan, M. M.(Eds.) . (2004). *Mindfulness* and acceptance: Expanding the cognitive-behavioral tradition. Guilford Press.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). Acceptance and commitment therapy, second edition: The process and practice of mindful change. The Guilford Press.
- Hofmann, S. G. (2007). Cognitive factors that maintain social anxiety disorder: A comprehensive model and its treatment implications. *Cognitive Behavior Therapy*, 36, 193–209. https://doi. org/10.1080/16506070701421313
- Hulleman, C. S., Durik, A. M., Schweigert, S., & Harackiewicz, J. M. (2008). Task values, achievement goals, and interest: An Integrative analysis. *Journal of Educational Psychology*, 100, 398–416. https://doi. org/10.1037/0022-0663.100.2.398
- Hulleman, C. S., & Harackiewicz, J. M. (2009). Making education relevant: Increasing interest and performance in high school science classes. Unpublished manuscript.
- Izard, C. E. (1994). Innate and universal facial expressions: Evidence from developmental and cross-cultural research. *Psychological Bulletin*, 115, 288–299. https://doi.org/10.1037/0033-2909.115.2.288
- Jordt, H., Eddy, S. L., Brazil, R., Lau, I., Mann, C., Brownell, S. E., King, K., & Freeman, S. (2017). Values affirmation intervention reduces achievement gap between underrepresented minority and white students in introductory biology classes. *Cell Biology Life Sciences Education*, 16, 1–10. https://doi.org/10.1187/cbe.16-12-0351
- Kashdan, T. B., & McKnight, P. E. (2013). Commitment to a purpose in life: An antidote to the suffering by individuals with social anxiety disorder. *Emotion*, 13(6), 1150–1159. https://doi.org/10.1037/ a0033278

- Lang, P. J., Davis, M., & Ohman, A. (2000). Fear and anxiety: Animal models and human cognitive psychophysiology. *Journal of Affective Disorders*, 61(3), 137–159. https://doi.org/10.1016/S0165 -0327(00)00343-8
- Layous, K., Davis, E. M., Garcia, J., Purdie-Vaughns, V., Cook, J. E., & Cohen, G. L. (2017). Feeling left out, but affirmed: Protecting against the negative effects of low belonging in college. *Journal* of Experimental Social Psychology, 69, 227-231. https://doi. org/10.1016/j.jesp.2016.09.008
- Lee, C. S., & Hayes-Skelton, S. A. (2017). Social cost bias, probability bias, and self-efficacy as correlates of behavioral action in social anxiety. *Behavior Modification*, 42, 1–21.
- Lindsay, E. K., & Crewell, J. D. (2014). Helping the self help others: Self affirmation increases self-compassion and pro-social behaviors. *Frontiers in Psychology*, 5, 421. https://doi.org/10.3389/fpsyg.20140 0421
- Lovibond, S. H., & Lovibond, P. F. (1995). Manual for the depression and anxiety stress scales. Psychology Foundation of Australia.
- MacDonald, P. L., & Gardner, R. C. (2000). Type 1 error rate comparisons of post hoc procedures for I J chi-square tables. *Educational* and Psychological Measurement, 60, 735–754. https://doi. org/10.1177/00131640021970871
- Marteau, T., & Bekker, H. (1992). The development of a six-item shortform of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). British Journal of Psychology, 31(3), 301-306. https://doi.org/10.1111/j.2044-8260.1992.tb00997.x
- Mellings, T. M. B., & Alden, L. E. (2000). Cognitive processes in social anxiety: The effects of self-focus, rumination and anticipatory processing. *Behaviour Research and Therapy*, 38, 243–257. https://doi. org/10.1016/S0005-7967(99)00040-6
- Miyake, A., Kost-Smith, L. E., Finkelstein, N. D., Pollock, S. J., Cohen, G. L., & Ito, T. A. (2010). Reducing the gender achievement gap in college science: A classroom study of values affirmation. *Science*, *26*, 1234–1237. https://doi.org/10.1126/science.1195996
- Neff, K. D., Hsieh, Y.-P., & Dejitterat K. (2005). Self-compassion, Achievement Goals, and Coping with Academic Failure. Self and Identity, 4(3), 263–287. https://doi.org/10.1080/1357650044 4000317
- Orsillo, S. M., Danitz, S. B., & Roemer, L. (2016). Mindfulness- and acceptance-based cognitive and behavioral therapies. In C. M. Nezu, A. M. Nezu, C. M. Nezu, & A. M. Nezu (Eds.), *The Oxford handbook of cognitive and behavioral therapies* (pp. 172–199). Oxford University Press.
- Ossman, W. A., Wilson, K. G., Storaasli, R. D., & McNeill, J. W. (2006). A preliminary investigation of the use of acceptance and commitment therapy in a group treatment for social phobia. *International Journal* of Psychology & Psychological Therapy, 6(3), 397–416.
- Pickett, L. L., Ginsburg, H. J., Mendez, R. V., Lim, D. E., Blankenship, K. R., Foster, L. E., & Sheffield, S. B. (2012). Ajzen's theory of planned behavior as it relates to eating disorders and body satisfaction. North American Journal of Psychology, 14(2), 339–354.
- Rimal, R. N. (2001). Perceived risk and self-efficacy as motivators: Understanding individuals' long-term use of health information. *Journal of Communication*, 51(4), 653–654. https://doi. org/10.1111/j.1460-2466.2001.tb02900.x

Roemer, L., & Orsillo, S. M. (2009). Mindfulness- and acceptance-based behavioral therapies in practice. Guilford Press.

Journal of Theoretical Social Psychology -WILE

- Sharpe, D. (2015). Your chi-square test is statistically significant: Now what? Practical Assessment, Research & Evaluation, 20, 1–10. http:// pareonline.net/getvn.asp?v=20&n=8
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). Manual for the state-trait anxiety inventory (form Y self-evaluation questionnaire). Consulting Psychologists Press.
- Stuart, M. (2003). Sources of subjective task value in sport: An examination of adolescents with high or low value for sport. *Journal of Applied Sport Psychology*, 15(3), 239–255. https://doi.org/10.1080/10413 200305388
- Sue, S., Zane, N., Nagayama Hall, G. C., & Berger, L. K. (2009). The case for cultural competency in psychotherapeutic interventions. *Annual Review of Psychology*, 60, 525–548. https://doi.org/10.1146/annur ev.psych.60.110707.163651
- Suyemoto, K. L., Erisman, S. M., Holowka, D. W., Fuchs, C., Barrett-Model, H., Ng, F., Liu, C., Chandler, D., Hazeltine, K., & Roemer, L. (2016). UMass Boston comprehensive demographic questionnaire, revised. As cited in Wadsworth, L. P., Morgan, L. P., Hayes-Skelton, S. A., Roemer, L., & Suyemoto, K. L. Ways to boost your research rigor through increasing your cultural competence. *The Behavior Therapist*, *39*, 83–89.
- Watts, R. J., Williams, N. C., & Jager, R. J. (2003). Sociopolitical development. American Journal of Community Psychology, 31, 185–194. https://doi.org/10.1023/A:1023091024140
- White, S. W., Keonig, K., & Scahill, L. (2007). Social skills development in children with autism spectrum disorders: A review of the intervention research. *Journal of Autism and Developmental Disorders*, 37, 1858–1868. https://doi.org/10.1007/s10803-006-0320-x
- Wigfield, A., Eccles, J. S., Yoon, K. S., Harold, R. D., Arbreton, A. J., Freedoman-Doan, C., & Blumenfeld, P. C. (1997). Change in children's competence beliefs and subjective task values across the elementary school years: A 3-year study. *Journal of Educational Psychology*, 89(3), 451–459. https://doi.org/10.1006/ceps.1999.1015
- Wilson, K. G., Sandoz, E. K., Flynn, M. K., Slater, R., & DuFrene, T. (2010). Understanding, assessing, and treating values processes in mindfulness and acceptance-based therapies. In R. Baer (Ed.), Assessing mindfulness and acceptance: Illuminating the processes of change (pp. 77–106). New Harbinger.
- Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. Communication Monographs, 59, 225–249. https://doi.org/10.1080/03637759209376276
- Zusho, A., Pintrich, P. R., & Cortina, K. S. (2005). Motives, goals, and adaptive patterns of performance in Asian American and Anglo American students. *Learning and Individual Differences*, 15(2), 141–158.

How to cite this article: Lee CS, Hayes-Skelton SA. Personal meaning as a predictor of behavioral action over and above the role of state social anxiety. *J Theo Soc Psychol*. 2020;00:1–9. https://doi.org/10.1002/jts5.81