Original Article

Must We Suffer to Succeed?

When Anxiety Boosts Motivation and Performance

Juliane Strack,[1,2] Paulo Lopes,[3] Francisco Esteves,[2,4] and Pablo Fernandez-Berrocal[5]

[1]Strandklinik St. Peter-Ording, Department for Psychosomatic Medicine, St. Peter-Ording, Germany
[2]Department of Social and Organizational Psychology, Instituto Universitário de Lisboa (ISCTE-IUL), Lisbon, Portugal
[3]Universidade Católica Portuguesa, Católica-Lisbon School of Business and Economics, Lisbon, Portugal
[4]Department of Psychology, Mid Sweden University, Östersund, Sweden
[5]Department Basic Psychology, University of Malaga, Spain

Abstract: Why do some people work best under pressure? In two studies, we examined whether and how people use anxiety to motivate themselves. As predicted, clarity of feelings moderated the relationship between trait anxiety and the tendency to use this emotion as a source of motivation (i.e., anxiety motivation). Furthermore, anxiety motivation mediated the relationship between trait anxiety and outcomes – including academic achievement (Study 1) as well as persistence and job satisfaction (Study 2). These findings suggest that individuals who are clear about their feelings are more likely to thrive on anxiety and eustress and possibly use these to achieve their goals and find satisfaction at work.

Keywords: anxiety, motivation, emotion regulation, emotional clarity, emotional intelligence

Many people claim that they work best under pressure or under stress, which suggests that they thrive in circumstances that tend to elicit anxiety or other emotions usually appraised as negative or unpleasant. Although these emotions tend to be subjectively experienced as unpleasant, they can also provide energy, focus, and determination, helping an individual to work hard toward a future goal. Anxiety, in particular, may have evolved as a mechanism that helps human beings to anticipate dangers ahead and work to avoid these, planning for the future (Csikszentmihalyi, 1993). Therefore, and in line with the framework of instrumental emotion regulation (Parrott, 1993; Tamir, Mitchell, & Gross, 2008), we investigated people's perceived tendency to use anxiety to motivate themselves.

There has been increasing interest in the upside of stress and negative emotions in recent years (e.g., McGonigal, 2015). Recent studies have found that negative emotions such as anxiety can be beneficial for performance, but only if anxiety is interpreted as facilitative (Strack & Esteves, 2015). Interpreting anxiety as facilitative was linked with appraising upcoming stressors as a challenge rather than a threat, and was found to help prevent emotional exhaustion in stressful times (Strack & Esteves, 2015). Another study examined two ways of using anxiety for self-motivation (i.e., anxiety motivation): drawing on the information or the energy that anxiety provides (Strack, Lopes, & Esteves, 2015). Both forms of anxiety motivation were found to protect against emotional exhaustion, in a one-year longitudinal study and in an experimental setting.

The present studies aim to extend these prior findings in two ways. First, we examine the moderating role of clarity of feelings as an important individual difference characteristic that may help people to use anxiety as a source of motivation. Second, we investigate the mediating role of anxiety motivation in the process through which anxiety may contribute to beneficial outcomes.

Functions and Utility of Negative Emotions

Appraisal theories of emotion (e.g., Frijda, 2007) suggest that the appraisal of a situation leads to action readiness, physiological arousal and affect, and these responses motivate behavior. In performance contexts, negative emotions such as anxiety can have both debilitative and facilitative properties. Debilitative properties include negative self-evaluations and negative expectations (Martens, Burton, Vealey, Bump, & Smith, 1990). Facilitative properties include working with enhanced effort and persistence (Parrott, 2002). Anxiety or fear can focus attention on perceived risks, trigger effort to avoid undesired outcomes, and thereby contribute to goal achievement.

According to the mood-as-input model (Clore, Schwarz, & Conway, 1994), negative affect may signal that there

DOI: 10.1027/1614-0001/a000228

are problems or issues requiring attention or improvement. This can stimulate increased effort and persistence (Martin & Stoner, 1996) or induce higher standards of performance (Cervone, Kopp, Schaumann, & Scott, 1994). For example, Martin, Ward, Achee, and Wyer (1993) found that participants in a negative mood ceased working on a task sooner if told to stop when they were no longer enjoying it, but worked longer on it if told to stop when they were satisfied with their performance. Participants in a positive mood showed the opposite pattern. Similarly, in a situation requiring creativity, De Dreu, Baas, and Nijstad (2008) found that negatively-valenced activating moods such as anger and fear led to greater perseverance than positively-valenced deactivating moods such as happiness or sadness.

Thus, negative emotions have important motivational properties. Positive emotions on the other hand, indicate that everything is going well (Fredrickson, 1998). They signal that one's goals are not threatened and that one may expect positive outcomes. Therefore, individuals experiencing positive affect may think that intense effort is unnecessary and may be disinclined to work hard toward a goal, especially if they think that the task is not intrinsically motivating and that such effort or hard work would undermine their good mood (Hirt, McDonald, & Melton, 1996; Parrott, 1993). Bi-dimensional theories of emotion, such as the circumplex model of affect (Russell, 1980), propose that emotional experience can be understood in terms of valence and arousal dimensions. According to this framework, anxiety is a negatively-valenced activating emotion because it is subjectively perceived as unpleasant and arousing. Whereas positive emotions are thought to trigger approach motivation, negative emotions such as fear or anxiety are often thought to trigger a motivation to avoid a feared object or a tendency to escape a dangerous situation (Izard & Ackerman, 2000). However, the link between negative emotions and avoidance motivation is less clear-cut than was previously thought. For example, anger has been associated with approach motivation, prompting people to assert their worth and confront an offender, instead of running away (Harmon-Jones & Allen, 1998). Similarly, the anxiety triggered by the realization that they are unprepared can prompt students to work hard for an exam.

Indeed, attentional control theory suggests that anxiety is associated with directing more effort at the task (Calvo & Eysenck, 1996; Eysenck, Derakshan, Santos, & Calvo, 2007). According to this theory, anxiety tends to undermine efficiency in the use of processing resources more than actual performance, engendering greater effort by increasing attention to threat-related stimuli (Eysenck et al., 2007).

All this suggests that, in some circumstances at least, negative emotions may induce effort and persistence, which Parrott (2002) described as the "functional utility" of negative emotions. Building upon our previous work (Strack et al., 2015), we propose that there are individual differences in the tendency to use anxiety as a source of motivation, henceforth designated *anxiety motivation*. We posit that some people capitalize on the heightened vigilance, attentional focus, information, and energy that anxiety can provide, in order to achieve their goals (Clore et al., 1994; Eysenck & Calvo, 1992; Harmon-Jones & Allen, 1998; Perkins & Corr, 2005). Because anxiety can enhance attention to goals, persistence, and performance expectations (e.g., Cervone et al., 1994; Martin & Stoner, 1996), we expect the ability to use anxiety as a source of motivation to contribute to persistence in goal striving, performance, and satisfaction at work.

Here, we view anxiety as a form of low-intensity fear that may be attributed to a specific threat or to more diffuse or pervasive concerns. Research suggests that trait anxiety includes cognitive and affective components (e.g., Morris, Davis, & Hutchings, 1981). Here, we are interested in the general and chronic experience of anxiety, including both cognitive and affective components, because we expect both dimensions to contribute to anxiety motivation. For example, both cognitive and affective components can alert people to potential threats and to the need to work harder. However, research also suggests that these two components are strongly related, indicating that anxiety can be treated as a unidimensional trait (Vagg, Spielberger, & O'Hearn, 1980). Thus, we investigated the general experience of trait anxiety – as measured by a widely-used questionnaire such as the trait scale of the State-Trait Anxiety Inventory (Spielberger, 1983) – and the general tendency to use anxiety to motivate oneself.

Instrumental Emotional Regulation and Clarity of Feelings

Research inspired by functional accounts of emotion, as well as the more recently proposed framework of instrumental emotion regulation, has led us to reconsider the role of trait anxiety in human achievement. Several studies support the idea that negative activating emotions can signal a need to exert greater effort and energize people to work harder on the task at hand (e.g., Cervone et al., 1994; Martin et al., 1993). Because negative emotions can be motivating and enhance performance, some people prefer to experience these emotions to complete particular tasks (Tamir & Ford, 2009).

Instrumental emotion regulation is said to occur when individuals choose to experience emotions that may be unpleasant but offer instrumental benefits (Tamir et al., 2008). In other words, when people have an instrumental goal (such as performing well on a task), they may sustain

emotions that will help them achieve that goal, even if these emotions entail short-term hedonic costs (Tamir, Chiu, & Gross, 2007). Erber, Erber, and Poe (2004) showed that, in anticipation of an important task, participants preferred to experience negative affect because too positive a mood might undermine their performance. Similarly, Tamir (2005) found that individuals high in neuroticism preferred to increase their level of worry when they expected to perform cognitively demanding tasks, and such choices improved their actual performance. There is further evidence that people prefer trait-consistent affective experiences and may perform better in such affective states (Coté & Moskowitz, 1998).

This suggests that individuals who are dispositionally anxious may work better when they feel anxious. Yet, other research suggests that, for people with high levels of trait anxiety, situations that increase anxiety tend to be perceived as threats and to undermine performance (e.g., Byron, Khazaridu, & Nazarian, 2010; Pearson & Thackray, 1970). How can we make sense of these apparently contradictory findings? We reasoned that mixed findings may reflect moderating effects. In particular, we propose that the capacity to use anxiety as a source of motivation is potentiated by clarity of feelings.

Clarity of feelings, an important aspect of the meta-mood experience, involves identifying and understanding one's emotions clearly (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). According to the mood-as-input model, people need to identify and understand their emotions clearly in order to interpret negative emotions as beneficial for goal pursuit. The ability to perceive one's own feelings clearly and to understand how one feels may enable individuals to appreciate the motivational benefits of negative emotions and to manage these effectively to attain their goals (Izard et al., 2011). Conversely, being unaware of or confused about their feelings may prevent people from using emotions effectively (Gohm, Corser, & Dalsky, 2005).

According to the theory of emotional intelligence (Mayer & Salovey, 1997), the ability to perceive and understand emotions provides crucial information for managing emotions intelligently. Clarity of feelings yields information (e.g., regarding why the stimulus is relevant to one's concerns) that facilitates the selection and implementation of effective emotion regulation strategies and adaptive responses (Barrett & Gross, 2001; Gross & Jazaieri, 2014; see also the discussion by Boden & Thompson, 2017). For example, recognizing that we are feeling anxious and understanding that the anxiety is due to an upcoming exam can help us decide to work harder and prepare for this challenge proactively. Building upon this theory and research, we propose that the ability to identify and understand their feelings clearly helps people to manage anxiety so as to enhance self-motivation. Specifically, we hypothesize that clarity of feelings moderates (enhances) the relationship between trait anxiety and anxiety motivation.

Overview and Summary of Hypotheses

Previous work on anxiety motivation examined specific aspects of this construct, discriminating the use of anxiety as a source of information and energy (e.g., Strack et al., 2015). Here, we examined whether general anxiety motivation (i.e., the general tendency to use anxiety for self-motivation, encompassing the use of anxiety as a source of both information and energy) can be explained by the interactive effect of trait anxiety (i.e., the general and chronic tendency to experience anxiety) and clarity of feelings. For this purpose, we developed a measure of general anxiety motivation and undertook its preliminary validation in a pilot study using a heterogeneous German sample. Then we investigated anxiety motivation in two other studies, including both academic and workplace contexts: university students majoring in journalism in Poland (Study 1) and working journalists at a leading daily newspaper in Germany (Study 2). Both groups face stressors on a regular basis and thus experience some level of stress and anxiety in a performance setting. University students have to meet coursework deadlines and take exams. Journalists at a daily newspaper work under tight deadlines, on assignments that are subject to change every day.

Based on the theory and research outlined before, we tested the following hypotheses, using the integrated mediated-moderation model depicted in Figure 1:

1. The relationship between trait anxiety and anxiety motivation is moderated by clarity of feelings, such that this relationship is more positive for individuals who are clear about their feelings (Studies 1 and 2).
2. Anxiety motivation mediates the relationship between trait anxiety and beneficial outcomes (academic achievement in Study 1, and persistence in goal striving and job satisfaction in Study 2), for individuals who are clear about their feelings.

Pilot Study

In a preliminary study, we examined the dimensional structure as well as the convergent and discriminant validity of a 4-item anxiety motivation scale developed for the present research. In particular, we examined its relationship with relevant constructs such as trait anxiety, emotion regulation, extrinsic and intrinsic motivation, as well as socially desirable responding. In keeping with common practice, we undertook an exploratory factor analysis first, before running a confirmatory factor analysis in the next study.

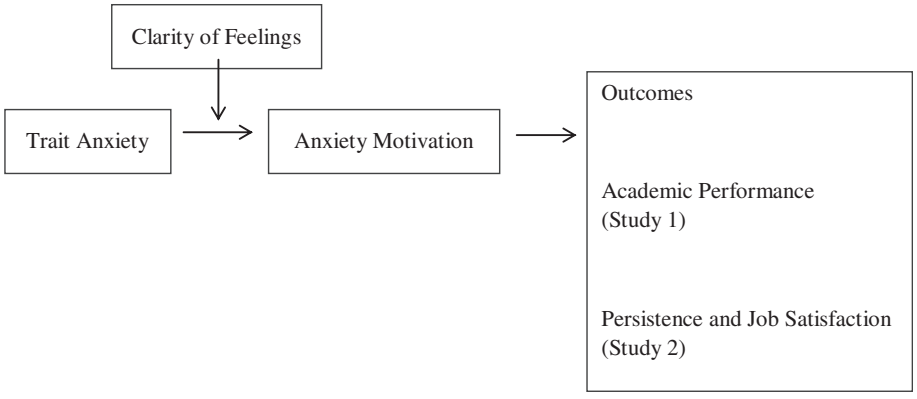

Figure 1. The mediated moderation model.

Method

Participants and Procedure

One hundred ninety-four participants were recruited through opportunity sampling at a large German university via email (27% university students, 70% workers from various professions, 3% other; 51% male, 49% female; mean age 33, *SD* = 11). Data were collected through both online and paper-based surveys. Questionnaires were administered in German.

Measures

Anxiety motivation was measured using a 4-item, one-dimensional exploratory scale of people's self-perceived tendency to use anxiety to motivate themselves. Although previous research suggests that people can draw on both the information and energy that anxiety provides (Strack et al., 2015), in the present studies we sought to measure individual differences in the general tendency to use anxiety as a source of self-motivation, rather than specific ways of doing so. Twelve items were generated by the authors, of which four were selected in collaboration with other researchers, according to the following criteria: items should (a) sample the general tendency to use anxiety as a source of motivation broadly; (b) use simple wording; and (c) have good face validity. The final selection included: feeling anxious about a deadline helps me to get the work done on time; feeling anxious helps me focus on what I need to improve upon; feeling anxious about my goals keeps me focused on them; feeling anxious in the past has motivated me to achieve some important goals in my life. Items that were dropped included: "when I fear failure I work harder" (retained items focused on feeling anxious in general, rather than fearing failure, which some people may experience only infrequently or not at all); and "worrying about something prevents me from being lazy" (worrying might imply only the cognitive component of anxiety). A 5-point response scale was used (1 = *disagree*, 5 = *agree*).

Trait anxiety, the propensity to experience anxiety and worry, was measured using the 20-item trait subscale of the State-Trait Anxiety Inventory (Spielberger, 1983), with a 4-point response scale (1 = *almost never*, 4 = *almost always*).

Self-perceived emotion regulation ability was measured with the emotion regulation subscale of the Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002), using a 5-point response format (1 = *disagree*, 5 = *agree*; as for the scales below).

Extrinsic and intrinsic motivation were measured with the corresponding subscales of the Motivation at Work Scale (Gagné et al., 2010).

Social Desirability was measured with the Marlowe Crowne Social Desirability Scale (Reynolds, 1982) to evaluate to what extent self-ratings of anxiety motivation reflect socially desirable responding.

Demographics. We also collected data on age, gender, and profession.

Results and Discussion

The anxiety motivation scale revealed high internal consistency (Cronbach's α = .83). An exploratory factor analysis of the four items (using principal axis factoring and considering eigenvalues, scree plot, and interpretability) yielded a single factor explaining 67% of the variance, with all items loading above .68. This suggests that the general tendency to use anxiety as a source of motivation can be adequately represented as a single dimension.

Next we examined whether anxiety motivation could be clearly distinguished from related constructs. For this purpose, we undertook a separate, exploratory factor analysis including anxiety motivation, trait anxiety, emotion regulation, extrinsic motivation, and intrinsic motivation items. Because the trait anxiety scale was much longer than all other measures, items from this scale were combined

Table 1. Five-factor exploratory factor analysis (principal axis factoring and promax rotation)

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Anxiety motivation item 1	.41	.13	.69	.22	.33
Anxiety motivation item 2	.04	.08	.77	.25	.13
Anxiety motivation item 3	.12	.00	.86	.50	.35
Anxiety motivation item 4	.19	.10	.75	.33	.17
Extrinsic motivation item 1	.07	−.18	.16	.20	.74
Extrinsic motivation item 2	−.08	−.23	.16	.20	.75
Extrinsic motivation item 3	−.65	.24	.13	.03	.32
Intrinsic motivation item 1	.87	−.32	.26	.23	.21
Intrinsic motivation item 2	.85	−.20	.07	−.00	−.06
Intrinsic motivation item 3	.95	−.14	.28	.09	.15
STAI Parcel 1 (items 1–5)	.03	.61	.32	.12	.12
STAI Parcel 2 (items 6–10)	−.14	.88	.02	−.33	−.32
STAI Parcel 3 (items 11–15)	−.41	.88	−.06	−.26	−.28
STAI Parcel 4 (items 16–20)	−.38	.93	−.09	−.33	−.32
Emotion regulation item 1	.04	−.09	.60	.69	.51
Emotion regulation item 2	.01	−.12	.36	.87	.07
Emotion regulation item 3	.07	−.22	.25	.66	.42
Emotion regulation item 4	.19	−.24	.36	.89	.27

Note. N = 194.

into four parcels. We used principal axis factoring and promax rotation, and retained five factors. The results (reported in Table 1) show that the four anxiety motivation items loaded above .69 on a single factor, separate from the other constructs.

Table 2 reports descriptive statistics and correlations for the measures included. Anxiety motivation correlated positively but not excessively with self-perceived emotion regulation ability and intrinsic motivation, as expected. Anxiety motivation was only weakly (and negatively) related to social desirability, attenuating concerns that the effects observed in subsequent studies might be inflated by socially desirable responding, a frequent source of common method bias. Considered together, these findings provide preliminary evidence of convergent and discriminant validity.

Study 1

In Study 1, we tested our hypotheses in a sample of students at a university in Poland. In school settings, students experience a variety of emotions related to their academic motivation and achievement (Pekrun, Goetz, Titz, & Perry, 2002). Anxiety is the emotion most frequently reported by students when they are asked about their emotional experience in school (Pekrun et al., 2002; Stöber, 2004). It may be triggered by the pressure to achieve and the anticipation of poor performance, among other factors. Many students experience anxiety not only when they are taking exams but also when they are studying, completing course assignments, or in class (Pekrun et al., 2002).

Method

Participants and Procedure

A total of 159 undergraduate students majoring in Journalism, in Poland, took part in this study. Age ranged from 17 to 38 (M = 23, SD = 2.69) and 61% were female. Students completed questionnaires anonymously online, in English. They were invited to participate only if they had good knowledge of English. Participants who reported insufficient knowledge of English or who did not follow instructions correctly (e.g., those who failed a couple of trap questions included in the questionnaire to detect random or careless responding) were screened out automatically.

Measures

Note that descriptive statistics and reliabilities for all scales are reported in Table 3. All measures except for Trait Anxiety used a 5-point response scale ranging from 1 (= *disagree*) to 5 (= *agree*).

Anxiety motivation was measured using the 4-item scale developed in the pilot study.

Trait anxiety was measured with the 20-item trait subscale of the State-Trait Anxiety Inventory (Spielberger, 1983), as in the pilot study.

Clarity of feelings was measured with an abridged 9-item version of the Clarity subscale of the Trait Meta-Mood

Table 2. Pilot study: Descriptive statistics, reliabilities, and correlations

	M	*SD*	1	2	3	4	5	
1. Anxiety motivation	3.05	0.87	(.83)					
2. Trait anxiety	2.12	0.50	.04	(.91)				
3. Emotion regulation	3.10	0.85	.38**	−.23**	(.84)			
4. Extrinsic motivation	3.44	1.06	.13	−.09	.23**	(.62)		
5. Intrinsic motivation	4.64	1.34	.23**	−.28**	.09	−.30**	(.91)	
6. Social desirability	3.19	0.87	−.15*	−.42**	−.08	−.10	.43**	(.83)

Notes. Internal consistency (Cronbach's alpha) is reported in parentheses along the diagonal. $N = 194$. *$p < .05$; **$p < .01$ (two-tailed).

Table 3. Study 1 (students): Descriptive statistics, reliabilities, and correlations

	M	*SD*	1	2	3	4
1. Trait anxiety	2.37	0.65	(.94)			
2. Anxiety motivation	3.40	0.98	−.10	(.83)		
3. Clarity of feelings	3.40	0.88	−.26**	.56**	(.66)	
4. Academic achievement	4.24	0.74	−.19**	.39**	.50**	–

Notes. Internal consistency (Cronbach's alpha) is reported in parentheses along the diagonal. $N = 159$. *$p < .05$; **$p < .01$ (two-tailed).

Scale (Salovey et al., 1995), assessing the perceived ability to clearly identify and understand emotions. Items with relatively high loadings were selected for this abridged version.

Academic achievement was measured using students' self-reports of the overall grade they obtained in the previous semester. Grades in Poland range from 1 to 6, 1 being the worst and 6 being the best (the pass grade is 2).

Demographics. We also collected data on age, gender, and course.

Results and Discussion

Descriptive statistics and zero-order correlations are reported in Table 3. Confirmatory Factor Analysis supported the unidimensional structure of the anxiety motivation scale: $X^2(2) = 1.15$, $p > .05$; CFI = 1.00; TLI = 1.00; RMSEA = 0.00. As expected, anxiety motivation correlated positively with academic achievement and clarity of feelings.

To test our hypotheses, we examined an integrated moderated-mediation/mediated-moderation model using the Process macro for SPSS developed by Hayes (2012). The independent variable was trait anxiety and the dependent variable academic grade (see Figure 1). In support of our first hypothesis, clarity of feelings significantly moderated the relationship between trait anxiety and anxiety motivation: this relationship was more positive for individuals who scored high on clarity of feelings (Table 4A). In line with Hypothesis 2, anxiety motivation mediated the relationship between trait anxiety and academic achievement for individuals who scored high on clarity of feelings (see Table 4A). Bootstrapping estimates of indirect effects showed that trait anxiety was positively associated with grade when clarity of feelings was high (.05), but not when it was low (−.05; see Table 4B). Thus, our hypotheses were fully supported. The direct effect of trait anxiety on academic achievement did not reach statistical significance but was relatively strong, suggesting anxiety motivation may only partially mediate this relationship.

Although we cannot infer causality, these results indicate that people who use anxiety to motivate themselves do better in college. Furthermore, they suggest that clarity of feelings helps people to use anxiety so as to enhance motivation and achievement. The limitations of this study and the next, including reliance on self-report measures and concerns regarding common method variance, will be discussed in the General Discussion section.

Study 2

It is important to find out whether beneficial outcomes of anxiety motivation can be observed not only in an academic setting but also in the workplace, in contexts where people are frequently exposed to stressors. Study 2 involved journalists working for a leading daily newspaper in Germany. These people chose a profession and a job that entails dealing with stressors at work every day. They have to cope with hectic time schedules and tight deadlines.

Table 4. Study 1 (Students): (A) Moderated-mediation model explaining Academic Achievement. (B) Conditional indirect effects of trait anxiety on Academic Achievement at different values of clarity of feelings

A			
	Coefficient	*SE*	*t*
Predicting anxiety motivation (mediator)			
Trait anxiety	.00	.08	−0.04
Clarity of feelings	.51**	.08	6.27
Trait Anxiety × Clarity of feelings	.14*	.06	2.34
Predicting academic achievement (DV)			
Trait anxiety	−.14	.08	−1.69
Anxiety motivation	.38**	.08	4.52

B				
			Confidence interval	
Values of moderator (clarity of feelings)	Effect	*SE*	Lower limit	Upper limit
−1 *SD*	−.05	.06	−.21	.03
Mean	.00	.03	−.07	.05
+1 *SD*	.05	.03	.01	.12

Notes. $N = 124$ (due to missing data). (.95 confidence interval). For the model predicting Anxiety Motivation (the mediator), $F(3, 120) = 21.86$, $p < .01$, $R^2 = .35$. For the model predicting Academic Achievement (DV), $F(2, 121) = 12.76$, $p < .01$, $R^2 = .17$. *$p < .05$; **$p < .01$ (two-tailed).

Therefore, they need to manage stress and anxiety at work and may be expected to use anxiety to motivate themselves. Here we tested the same hypotheses as in Study 1, focusing on persistence in goal striving and job satisfaction as relevant outcomes for this group and as indicators of an individual's ability to thrive in a highly stressful environment. It was not possible to measure job performance.

Method

Participants and Procedure

We invited 270 journalists at a daily German newspaper to take part in the study. Sixty-five were located in the head office and the others in 28 local offices across the region. In total, 191 (71%) agreed to participate. All were German and 36% were female. Age ranged from 27 to 64 ($M = 45$, $SD = 8.98$). Scales for which we found no established German version were translated into German by two individuals, and then backtranslated into English by a third person to ensure that the translation was accurate (Brislin, 1970). Data were collected online using self-report questionnaires.

Measures

All measures except for Trait Anxiety and Job Satisfaction used a 5-point response scale ranging from 1 (= *disagree*) to 5 (= *agree*). Anxiety Motivation and Clarity of Feelings were measured using the same scales as in Study 1.

Trait Anxiety was again assessed with the corresponding subscale from the State-Trait-Anxiety Inventory (Spielberger, 1983). Due to practical constraints, we used an abridged, 10-item version of the established German adaptation by Laux, Glanzmann, Schaffner, and Spielberger (1981). This abridged scale included high-loading items selected to (a) tap into both emotional and cognitive aspects of anxiety, and (b) indicate both the presence and absence of anxiety (Spielberger, 1983).

Job Satisfaction was measured using the 8-item Abridged Job in General Scale (Russell et al., 2004). Response options are *Yes* (coded as 3)/*No* (coded as 0)/*Cannot decide* (coded as 1). The instructions state: "Think of your job in general. How well does each of the following words or phrases describe your job?" Example responses are "enjoyable" and "poor."

Persistence in Goal Striving, reflecting the extent to which people persist in striving toward goals, particularly in challenging circumstances, was measured using the corresponding 5-item subscale of the Measurement Instrument for Primary and Secondary Control Strategies (Wrosch, Heckhausen, & Lachman, 2000).

Demographics. We also measured age, gender, and nationality.

Results and Discussion

Preliminary Analyses

As can be seen in Table 5, which reports descriptive statistics and internal consistencies for all measures included, anxiety motivation correlated significantly and positively with job satisfaction and clarity of feelings.

Table 5. Study 2 (Journalists): Descriptive statistics, reliabilities, and correlations

	M	*SD*	1	2	3	4	5
1. Trait anxiety	2.22	0.83	(.95)				
2. Anxiety motivation	3.07	1.16	.44**	(.87)			
3. Clarity of feelings	3.83	0.89	−.14	.28**	(.94)		
4. Job satisfaction	2.17	0.97	−.10	.44**	.58**	(.93)	
5. Persistence	3.93	1.03	−.10	.39**	.39**	.71**	(.92)

Notes. Internal consistency (Cronbach's alpha) is reported in parentheses along the diagonal. $N = 191$. *$p < .05$; **$p < .01$ (two-tailed).

Table 6. Study 2 (Journalists): (A) Moderated-mediation model explaining job satisfaction. (B) Conditional indirect effects of trait anxiety on job satisfaction at different values of clarity of feelings

A

	Coefficient	*SE*	*t*
Predicting anxiety motivation (mediator)			
Trait anxiety	.44**	.06	6.88
Clarity of feelings	.32**	.06	4.97
Trait Anxiety × Clarity of feelings	.27**	.06	4.37
Predicting job satisfaction (DV)			
Trait anxiety	−.37**	.07	−5.06
Anxiety motivation	.61**	.07	8.32

B

			Confidence interval	
Values of moderator (clarity of feelings)	Effect	*SE*	Lower limit	Upper limit
−1 *SD*	.11	.05	.01	.21
Mean	.27	.05	.18	.38
+1 *SD*	.44	.07	.32	.58

Notes. $N = 191$. (.95 confidence interval). For the model predicting Anxiety Motivation (the mediator), $F(3, 160) = 33.54$, $p < .01$, $R^2 = .39$. For the model predicting Job Satisfaction (DV), $F(2, 161) = 35.87$, $p < .01$, $R^2 = .31$. *$p < .05$; **$p < .01$ (two-tailed).

Moderated Mediation

We tested our hypotheses using the Process macro from Hayes (2012), as in Study 1 (see Figure 1). In support of our hypotheses, clarity of feelings significantly moderated the relationship between trait anxiety and anxiety motivation (Table 6A). Anxiety motivation partially mediated the relationship between trait anxiety and job satisfaction. Furthermore, bootstrapping indices showed that when clarity of feelings was high, trait anxiety was positively associated with job satisfaction (through anxiety motivation, Table 6B). We found similar results for the model examining persistence in goal striving as the dependent variable (Tables 7A and 7B). The conditional indirect effects of trait anxiety on both dependent variables were positive at all values of the moderator, but stronger for individuals who scored high versus low on clarity of feelings.

The fact that the direct effects of trait anxiety on both outcomes were negative, whereas the indirect effects via anxiety motivation were positive, highlights the importance of our mediation analysis. This finding suggests that trait anxiety tends to undermine persistence in goal striving and job satisfaction, but these negative direct effects are partially offset by the fact that anxiety can also be used as a source of motivation (the positive indirect effect via anxiety motivation, whose strength depends on clarity of feelings).

The results of this study extend those of Study 1 to a professional context, examining additional outcomes. In particular, they suggest that people who work in a stressful professional environment can use anxiety to motivate themselves – particularly if they are clear about their feelings – and thereby exhibit greater persistence in goal striving and find satisfaction at work.

General Discussion

The present studies shed light on individual differences in emotional experience and how people can use anxiety as a source of motivation, particularly when they understand

Table 7. Study 2 (Journalists): (A) Moderated-mediation model explaining persistence. (B) Conditional indirect effects of trait anxiety on persistence at different values of clarity of feelings

A

	Coefficient	*SE*	*t*
Predicting anxiety motivation (mediator)			
Trait anxiety	.44**	.06	6.91
Clarity of Feelings	.32**	.06	4.99
Trait Anxiety × Clarity of Feelings	.27**	.06	4.38
Predicting persistence (DV)			
Trait anxiety	−.20*	.08	−2.35
Anxiety motivation	.40**	.08	4.82

B

			Confidence interval	
Values of moderator (clarity of feelings)	Effect	*SE*	Lower limit	Upper limit
−1 *SD*	.07	.04	.02	.16
Mean	.18	.04	.10	.27
+1 *SD*	.29	.06	.17	.40

Notes. $N = 191$. For the model predicting Anxiety Motivation (the mediator), $F(3, 161) = 34.06$, $p < .01$, $R^2 = .39$. For the model predicting Persistence (DV), $F(2, 162) = 11.67$, $p < .01$, $R^2 = .13$. *$p < .05$; **$p < .01$ (two-tailed).

their feelings clearly. The results were consistent across two different samples and cultures. In an academic context, anxiety motivation mediated the relationship between trait anxiety and academic achievement, when individuals had high levels of emotional clarity. Likewise, in a work context, among journalists, anxiety motivation partially mediated the effects of trait anxiety on both goal persistence and job satisfaction, again moderated by clarity of feelings. The present studies suggest that it is not only anxiety per se that ultimately influences performance, persistence, and satisfaction, but rather the way people experience, respond to, and feel energized or motivated by anxiety. Using anxiety as a source of motivation seems to offset the otherwise detrimental effects of anxiety. Furthermore, both studies suggest that in order to use anxiety for self-motivation, it is important to be clear about one's feelings.

The present findings extend previous work in this area (Strack & Esteves, 2015; Strack et al., 2015) in several ways. First, we identified a configuration of individual difference characteristics associated with the use of anxiety for self-motivation: the frequent experience of anxiety combined with clarity of feelings. This finding suggests that clarity of feelings enables people to view and experience anxiety as facilitating performance, thereby contributing to the literature on the facilitative effects of anxiety as well. Second, we revealed the mediating role of anxiety motivation in the relationship between trait anxiety and positive outcomes. Additionally, we developed a measure of general anxiety motivation and tested its effects in two different contexts and cultures.

Our findings are in line with prior research linking affective experience and motivation at work (e.g., Carver & Scheier, 1990; Foo, Uy, & Baron, 2009; Ilies & Judge, 2005; Louro, Pieters, & Zeelenberg, 2007). Although negative emotions may sometimes harm performance, research indicates that this effect is moderated by coping strategies (Brown, Westbrook, & Challagalla, 2005). Similarly, the present findings suggest that, although chronic (trait) anxiety can undermine performance (trait anxiety correlated negatively with academic achievement in Study 1), people can also use anxiety to motivate themselves and achieve positive outcomes – as long as they are clear about their feelings. This implies that trait anxiety is not necessarily a handicap. In fact, people predisposed to experience anxiety may have an advantage in instrumental emotion regulation if they are able to use anxiety as a source of self-motivation, and thereby make the most of this disposition.

We found a positive relationship between trait anxiety and anxiety motivation among journalists in Study 2, but not among students in Study 1. There may be several reasons for this, including self-selection and learning effects. It is possible that individuals who are prone to anxiety choose stressful jobs only if they can manage their emotions and use anxiety to motivate themselves. It is also possible that journalists predisposed to experience anxiety learn to use anxiety to motivate themselves on the job, and thereby learn to cope with a stressful environment (with age, people tend to get better at regulating their emotions; Lawton, 2001).

Although our results stand in contrast to some previous findings regarding the potentially demotivating effects of

negative emotions (e.g., Aarts, Custers, & Holland, 2007), these apparently contradictory results can be reconciled if we consider the role of emotion regulation and different causal chains. Previous findings pointing to the demotivating effects of negative emotions suggest that people may reduce effort if they repeatedly experience negative emotions and therefore no longer desire to achieve a particular goal (Aarts et al., 2007). However, if negative emotions are used as a source of motivation, focus, and energy to work hard and to achieve one's goals, they may have the opposite effect. This idea is consistent with findings on the facilitative effects of negative emotions. According to the mood-as-input model (Clore et al., 1994), negative emotions such as anxiety can stimulate increased effort, persistence, and higher standards of performance (Cervone et al., 1994; De Dreu et al., 2008; Martin & Stoner, 1996; Strack & Esteves, 2015). These emotions signal that there are issues to address, requiring attention and effort, in order to attain one's goals (in contrast to positive emotions, which tend to signal that everything is going well). Therefore, negative emotions can increase effort and persistence if they are experienced as a signal to work harder, which requires emotional clarity.

One limitation of these studies is that they relied on cross-sectional, self-report data. In particular, correlations could be inflated by common method variance. This concern is attenuated by the fact that anxiety motivation was only weakly (and negatively) related to socially desirable responding in the pilot study. We relied on self-report measures because using negative emotions for self-motivation is an internal process that cannot be observed clearly by others and therefore cannot be adequately studied using informant ratings. Despite its flaws, verbal report may be the best way of assessing the subjective experience of emotions and related beliefs (Feldman-Barrett, 2006). Moreover, the results of moderation analyses cannot be explained by common method variance. Siemsen, Roth, and Oliveira (2010) showed that common method variance does not lead to artificial interaction effects. By contrast, it deflates existing interactions effects, which makes it more difficult to find a significant interaction when common method variance exists. Nevertheless, future research should examine objective indicators of performance and informant ratings of observable beneficial outcomes. Further research is also needed to determine to what extent our findings generalize to different cultures, professions, and negative emotions (e.g., using anger as a source of motivation). Finally, it would be interesting to further examine the dimensional structure and nomological net of anxiety motivation, as well as to discriminate the cognitive and affective components of trait anxiety in future research on anxiety motivation.

Conclusion and Practical Implications

Despite these limitations, our results help us understand how people can use the experience of anxiety to motivate themselves and why people respond differently to stressors. Anxiety motivation may contribute to the experience of eustress (good stress) rather than distress (e.g., Selye, 1956, 1987). Examining this link is another promising avenue for further research, especially considering that the concept of eustress has received relatively little attention (Le Fevre, Matheny, & Kolt, 2003). Using anxiety as a source of motivation can be viewed as a form of emotion regulation that entails capitalizing on the focus, energy, and information provided by anxiety, while attenuating the subjective perception of displeasure typically is associated with fear or anxiety. This idea highlights the provocative possibility that managing emotions involves not only modulating the intensity of emotional experience, but also altering its perceived valence and thereby influencing the subjective experience of emotion, shifting one's profile of affective experience on the emotion circumplex.

If substantiated by further research, our findings have implications for training – particularly for emotion regulation and stress management interventions, and efforts to enhance emotional intelligence in the workplace. Training people to use negative emotions and stress as a source of motivation may enhance engagement, performance, adaptation, and well-being in stressful or high-pressure work environments. The effects of such training may be enhanced by educating people to identify and understand their feelings, and to recognize the benefits of negative emotions, contributing to a more positive emotional and meta-mood experience.

Acknowledgments

The first author's work on this project was funded by a doctoral fellowship from Portugal's Foundation for Science and Technology (Reference Number: FCT – DFRH – Bolsa SFRH/BD/62085/2009). Francisco Esteves is currently with the Department of Psychology, Mid Sweden University, Östersund, Sweden.

References

Aarts, H., Custers, R., & Holland, R. W. (2007). The nonconscious cessation of goal pursuit: When goals and negative affect are coactivated. *Journal of Personality and Social Psychology, 92*, 165–178. doi: 10.1037/0022-3514.92.2.165

Barrett, L. F., & Gross, J. J. (2001). Emotion representation and regulation: A process model of emotional intelligence. In T. Mayne & G. Bonnano (Eds.), *Emotion: Current issues and future directions* (pp. 286–310). New York, NY: Guilford.

Boden, M. T., & Thompson, R. J. (2017). Meta-analysis of the association between emotional clarity and attention to emotions. *Emotion Review, 9*, 79–85. doi: 10.1177/1754073915610640

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*, 185–216. doi: 10.1177/135910457000100301

Brown, S. P., Westbrook, R. A., & Challagalla, G. (2005). Good cope, bad cope: Adaptive and maladaptive coping strategies following a critical negative work event. *Journal of Applied Psychology, 90*, 792–798. doi: 10.1037/0021-9010.90.4.792

Byron, K., Khazanchi, S., & Nazarian, D. (2010). The relationship between stressors and creativity: A meta-analysis examining competing theoretical models. *Journal of Applied Psychology, 95*, 201–212. doi: 10.1037/a0017868

Calvo, M. G., & Eysenck, M. W. (1996). Phonological working memory and reading in test anxiety. *Memory, 4*, 289–305. doi: 10.1080/096582196388960

Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review, 97*, 19–35. doi: 10.1037/0033-295X.97.1.19

Cervone, D., Kopp, D. A., Schaumann, L., & Scott, W. D. (1994). Mood, self-efficacy, and performance standards: Lower moods induce higher standards for performance. *Journal of Personality and Social Psychology, 67*, 499–512. doi: 10.1037/0022-3514.67.3.499

Clore, G. L., Schwarz, N., & Conway, M. (1994). Affective causes and consequences of social information processing. In R. S. Wyer Jr. & T. K. Srull (Eds.), *Handbook of Social Cognition* (pp. 323–418). Hillsdale, NJ: Erlbaum.

Coté, S., & Moskowitz, D. S. (1998). On the dynamic covariation between interpersonal behavior and affect: Prediction from neuroticism, extraversion, and agreeableness. *Journal of Personality and Social Psychology, 75*, 1032–1046. doi: 10.1037/0022-3514.75.4.1032

Csikszentmihalyi, M. (1993). *The evolving self*. New York, NY: Harper Perennial.

De Dreu, C. K., Baas, M., & Nijstad, B. A. (2008). Hedonic tone and activation level in the mood-creativity link: Toward a dual pathway to creativity model. *Journal of Personality and Social Psychology, 94*, 739–756. doi: 10.1037/0022-3514.94.5.739

Erber, R., Erber, M. W., & Poe, J. (2004). Mood regulation and decision making: Is irrational exuberance really a problem? In I. Brocas & J. D. Carillo (Eds.), *The psychology of economic decisions* (pp. 197–221). Oxford, UK: Oxford University Press.

Eysenck, M., & Calvo, M. G. (1992). Anxiety and performance: The processing efficiency theory. *Cognition and Emotion, 6*, 409–434. doi: 10.1080/02699939208409696

Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion, 7*, 336–353. doi: 10.1037/1528-3542.7.2.336

Feldman-Barrett, L. (2006). Solving the emotion paradox: Categorization and the experience of emotion. *Personality and Social Psychology Review, 10*, 20–46. doi: 10.1207/s15327957pspr1001_2

Foo, M. D., Uy, M., & Baron, R. A. (2009). How do feelings influence effort? An empirical study of entrepreneurs' affect and venture effort. *Journal of Applied Psychology, 94*, 1086–1094. doi: 10.1037/a0015599

Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300–319. doi: 10.1037/1089-2680.2.3.300

Frijda, N. H. (2007). *The laws of emotion*. Mahwah, NJ: Erlbaum.

Gagné, M., Forest, J., Gilbert, M.-H., Aubé, C., Morin, E., & Malorni, A. (2010). The Motivation at Work Scale: Validation evidence in two languages. *Educational and Psychological Measurement, 70*, 628–646. doi: 10.1177/0013164409355698

Gohm, C. L., Corser, G. C., & Dalsky, D. J. (2005). Emotional intelligence under stress: Useful, unnecessary, or irrelevant? *Personality and Individual Differences, 39*, 1017–1028. doi: 10.1016/j.paid.2005.03.018

Gross, J. J., & Jazaieri, H. (2014). Emotion, emotion regulation, and psychopathology: An affective science perspective. *Clinical Psychological Science, 2*, 387–401. doi: 10.1177/2167702614536164

Harmon-Jones, E., & Allen, J. J. (1998). Anger and frontal brain activity: EEG asymmetry consistent with approach motivation despite negative affective valence. *Journal of Personality and Social Psychology, 74*, 1310–1316. doi: 10.1037/0022-3514.74.5.1310

Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]*. Retrieved from http://www.afhayes.com/public/process2012.pdf

Hirt, E. R., McDonald, H. E., & Melton, R. J. (1996). Processing goals and the affect-performance link: Mood as main effect or mood as input? In L. L. Martin & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self-regulation* (pp. 303–328). Mahwah, NJ: Erlbaum.

Ilies, R., & Judge, T. A. (2005). Goal regulation across time: The effect of feedback and affect. *Journal of Applied Psychology, 90*, 453–467. doi: 10.1037/0021-9010.90.3.453

Izard, C. E., & Ackerman, B. P. (2000). Motivational, organizational, and regulatory functions of discrete emotions. In M. Lewis & J. Haviland-Jones (Eds.), *Handbook of emotions* (pp. 253–322). New York, NY: Guilford Press.

Izard, C. E., Woodburn, E. M., Finlon, K. J., Krauthamer-Ewing, E. S., Grossman, S. R., & Seidenfeld, A. (2011). Emotion knowledge, emotion utilization, and emotion regulation. *Emotion Review, 3*, 44–52. doi: 10.1177/1754073910380972

Laux, L., Glanzmann, P., Schaffner, P., & Spielberger, C. D. (1981). *State-Trait-Angst-Inventar STAI*. Weinheim, Germany: Beltz.

Lawton, M. P. (2001). Emotion in later life. *Current Directions in Psychological Science, 10*, 120–123. doi: 10.1111/1467-8721.00130

Le Fevre, M., Matheny, J., & Kolt, G. S. (2003). Eustress, distress, and interpretation of occupational stress. *Journal of Managerial Psychology, 18*, 726–744. doi: 10.1108/02683940610684391

Louro, M. J., Pieters, R., & Zeelenberg, M. (2007). Dynamics of multiple goal pursuit. *Journal of Personality and Social Psychology, 93*, 174–193. doi: 10.1037/0022-3514.93.2.174

Martens, R., Burton, D., Vealey, R. S., Bump, L. A., & Smith, D. E. (1990). Development and validation of the Competitive State Anxiety Inventory-2 (CSAI-2). In R. Martens, R. S. Vealey, & D. Burton (Eds.), *Competitive anxiety in sport* (pp. 117–213). Champaign, IL: Human Kinetics.

Martin, L. L., & Stoner, P. (1996). Mood as input: What we think about how we feel determines how we think. In L. L. Martin & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self-regulation* (pp. 279–301). Mahwah, NJ: Erlbaum.

Martin, L. L., Ward, D. W., Achee, J. W., & Wyer, R. S. (1993). Mood as input: People have to interpret the motivational implications of their moods. *Journal of Personality and Social Psychology, 64*, 317–326. doi: 10.1037/0022-3514.64.3.317

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). New York, NY: Basic Books.

McGonigal, K. (2015). *The upside of stress: Why stress is good for you and how to get good at it*. New York, NY: Avery.

Morris, L. W., Davis, M. A., & Hutchings, C. H. (1981). Cognitive and emotional components of anxiety: Literature review and a revised worry-emotionality scale. *Journal of Educational Psychology, 73*, 541–555. doi: 10.1037/0022-0663.73.4.541

Parrott, W. G. (1993). Beyond hedonism: Motives for inhibiting good moods and for maintaining bad moods. In D. M. Wegner & J. W. Pennebaker (Eds.), *Handbook of mental control* (pp. 278–305). Englewood Cliffs, NJ: Prentice-Hall.

Parrott, W. G. (2002). The functional utility of negative emotions. In L. F. Barrett & P. Salovey (Eds.), *The wisdom in feeling: Psychological processes in emotional intelligence* (pp. 341–359). New York, NY: Guilford Press.

Pearson, D. W., & Thackray, R. I. (1970). Consistency of performance change and autonomic response as a function of expressed attitude toward a specific stress situation. *Psychophysiology, 6*, 561–568. doi: 10.1111/j.1469-8986.1970.tb02245.x

Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist, 37*, 91–105. doi: 10.1207/S15326985EP3702_4

Perkins, A. M., & Corr, P. J. (2005). Can worriers be winners? The association between worrying and job performance. *Personality and Individual Differences, 38*, 25–31. doi: 10.1016/j.paid.2004.03.008

Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology, 38*, 119–125. doi: 10.1002/1097-4679(198201)

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology, 39*, 1161–1178. doi: 10.1037/h0077714

Russell, S. S., Spitzmüller, C., Lin, L. F., Stanton, J. M., Smith, P. C., & Ironson, G. H. (2004). Shorter can also be better: The abridged Job in General scale. *Educational and Psychological Measurement, 64*, 878–893. doi: 10.1177/0013164404264841

Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the trait meta-mood scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 125–154). Washington, DC: American Psychological Association.

Selye, H. (1956). *The stress of life*. New York, NY: McGraw Hill.

Selye, H. (1987). *Stress without distress* (pp. 197–221). London, UK: Transworld.

Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods, 13*, 456–476. doi: 10.1177/1094428109351241

Spielberger, C. D. (1983). *Manual for the State-Trait Anxiety Inventory (STAI)*. Palo Alto, CA: Consulting Psychologists Press.

Stöber, J. (2004). Dimensions of test anxiety: Relations to ways of coping with pre-exam anxiety and uncertainty. *Anxiety, Stress and Coping, 17*, 213–226. doi: 10.1080/10615800412331292615

Strack, J., & Esteves, F. (2015). Exams? Why worry? Interpreting anxiety as facilitative and stress appraisals. *Anxiety, Stress, and Coping, 28*, 205–214. doi: 10.1080/10615806.2014.931942

Strack, J., Lopes, P., & Esteves, F. (2015). Will you thrive under pressure or burn out? Linking anxiety motivation and emotional exhaustion. *Cognition and Emotion, 29*, 578–591. doi: 10.1080/02699931.2014.922934

Tamir, M. (2005). Don't worry, be happy? Neuroticism, trait-consistent affect regulation, and performance. *Journal of Personality and Social Psychology, 89*, 449–461. doi: 10.1037/0022-3514.89.3.449

Tamir, M., Chiu, C. Y., & Gross, J. J. (2007). Business or pleasure? Utilitarian versus hedonic considerations in emotion regulation. *Emotion, 7*, 546–554. doi: 10.1037/1528-3542.7.3.546

Tamir, M., & Ford, B. Q. (2009). Choosing to be afraid: Preferences for fear as a function of goal pursuit. *Emotion, 9*, 488–497. doi: 10.1037/a0015882

Tamir, M., Mitchell, C., & Gross, J. J. (2008). Hedonic and instrumental motives in anger regulation. *Psychological Science, 19*, 324–328. doi: 10.1111/j.1467-9280.2008.02088.x

Vagg, P. R., Spielberger, C. D., & O'Hearn, T. P. (1980). Is the state-trait anxiety inventory multidimensional? *Personality and Individual Differences, 1*, 207–214. doi: 10.1016/0191-8869(80)90052-5

Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly, 13*, 243–274. doi: 10.1016/S1048-9843(02)00099-1

Wrosch, C., Heckhausen, J., & Lachman, M. E. (2000). Primary and secondary control strategies for managing health and financial stress across adulthood. *Psychology and Aging, 15*, 387–399. doi: 10.1037/0882-7974.15.3.387

Received February 18, 2016
Revision received September 13, 2016
Accepted October 10, 2016
Published online May 24, 2017

Juliane Strack
Strandklinik St. Peter Ording
Psychosomatic Medicine
Fritz-Wischer-Straße 3
25826 St. Peter Ording
Germany
j.strack@strandklinik-spo.de

