

ANXIETY DISORDERS: A QUARTERLY REPORT

SPRING 2007

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A NOTE FROM THE EDITOR

As the season changes from spring to summer, we reach the midpoint between ABCT meetings. Chicago may feel like a distant memory and your planning for Philadelphia may not have begun in earnest. With the idea of bridging the annual conferences in mind, we dedicate this newsletter to the winners of last year's Anxiety SIG Early Career Award (Todd Kashdan) and Anxiety SIG Student Poster Awards (Cassidy Gutner and Natalie Castriotta). It is our pleasure to share with you the fine work each of them presented at last year's conference. A read through their articles confirms not only the correctness in awarding them these honors, but also the quality of research conducted by the SIG members. Congratulations again to all three!

Andrew T. Gloster
and the newsletter team

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FEATURED ARTICLE

New Perspectives on Social Anxiety: Addressing the Positive Spectrum of Human Functioning

Todd B. Kashdan

George Mason University

I am extremely grateful for being the recipient of the Anxiety Disorder Special Interest Group (SIG) Early Career Award as part of the 40th Annual Convention of the Association for Behavioral and Cognitive Therapies. This article is a brief summary of the research that I presented at the annual SIG meeting.

Since the official recognition of social phobia in the DSM in 1980 (now referred to as social anxiety disorder; SAD), there has been extensive research on its features and classification. This basic research has led to efficacious treatments with evidence that symptom reduction and improvements in general functioning are relatively stable up to 5-10 years following treatment (Beidel, Turner, & Young, 2006; Fava et al.,

2001). The purpose of this brief article is to discuss some recent advances in the conceptualization of social anxiety that might offer a re-evaluation of prior knowledge. This includes data showing social anxiety is associated with diminished positive experiences and infrequent positive events, and some of the factors that affect these relations.

Approach-Avoidance Framework

For decades, psychologists have advocated a bipolar conceptualization of approach and avoidance processes on a single continuum with positive affect and approach behavior as one endpoint and negative affect and avoidance behavior as the other endpoint. However, recent research in personality, motivation, and social neuroscience suggest that there are two relatively independent approach and avoidance systems (Carver, Sutton, & Scheier, 2000; Gray & McNaughton, 1996). This implies that without any

SPECIAL POINTS OF INTEREST:

- Diminished positive affect and exploratory behavior in social anxiety
- Research focusing on predictors of post-traumatic stress disorders in female victims
- Chronological onset of anxiety, mood, and eating disorders
- Special Anxiety-SIG announcements and upcoming events

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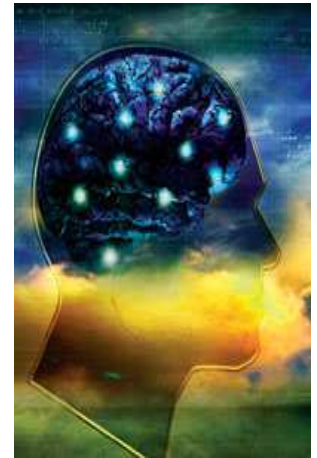
other information, knowing the degree to which people are sensitive to pain and punishment offers little insight about their sensitivity to reward incentives. Yet, some psychological disorders such as depression and schizophrenia are partially defined by overactive avoidance and underactive approach/reward systems (e.g., Berenbaum & Oltmanns, 1992; Blanchard, Mueser, & Bellack, 1998). It is only recently that SAD has been given consideration as a possible impediment to features of the approach system- positive affect, appetitive motivation, and reward sensitivity.

Social Anxiety and Positive Experiences and Events

Any psychological condition that directly interferes with social relationships has the potential to disrupt a primary source of positive events and experiences. People with SAD are hyper-focused on making a good impression on other people but doubt that they can do so (Clark & Wells, 1995; Schlenker & Leary, 1982). Part of this doubt stems from the belief that their anxiety and extreme self-awareness will disrupt their social performance. In response, people with SAD devote considerable energy to controlling, fearing, and avoiding anxious thoughts, feelings, and behaviors. People who inefficiently allocate substantial resources to impression management and the regulation of anxious symptoms tend to show impairments in other goal-directed behavior that requires effort and intention. This is because individuals have a limited amount of physical energy, attention, and self-control at any given point of time and over-exertion can essentially drain this pool of resources (Muraven & Baumeister, 2000). The enormous time, effort, and energy devoted to emotion regulation is proposed to diminish contact with present experiences, interfere with progress toward valued goals, and yield impairments in the frequency and quality of positive events. The paradox is that excessive attempts to make a positive impression, be less anxious, and avoid rejection lead to a depletion of the necessary self-regulatory resources to effectively attend to and extract rewards from the social environment. Less socially anxious people are expected to be more capable of pursuing aspirational goals involving rewards given the fact that they do not have the resource drain associated with SAD (see Kashdan, 2007 for details on this theoretical framework).

The question of whether diminished positive experiences are a relevant feature of the social anxiety spectrum has implications for understanding emotional disturbances to the development of more potent interventions. My colleagues and I conducted several empirical studies on the relation between the social anxiety spectrum and positive experiences in clinical and non-clinical populations (Kashdan, 2002, 2004; Kashdan & Breen, in press; Kashdan, Julian, Merritt, & Uswatte, 2006; Kashdan & Roberts, 2004; Kashdan & Steger, 2006). Results from a meta-analysis of published and unpublished studies since 1950 (Kashdan, 2007) show that social anxiety has a stable inverse relation with both positive affect ($r = -.36$; 95% CI: $-.31$ to $-.40$) and curiosity and exploratory tendencies ($r = -.24$; 95% CI: $-.20$ to $-.28$). Most importantly, even after excluding the common variance attributable to depressive symptoms and disorders, correlations between social anxiety and positive affect ($r = -.21$; 95% CI: $-.16$ to $-.26$) and curiosity ($r = -.21$; 95% CI: $-.08$ to $-.32$) remained. As evidence of construct specificity, these correlations reflect the incremental validity of social anxiety after accounting for depression.

Whereas excessive social anxiety is commonly associated with negative affect and behavioral inhibition, there is evidence to suggest that, at least for some people, social anxiety is related to diminished positive affect and exploratory behavior. It is also possible that relations between social anxiety and positive experiences and events varies as a function of how much energy and effort is devoted to managing anxiety, thus leading to depleted resources. My colleague and I examined whether levels of social anxiety and affect regulatory strategies operate together to predict positive events and experiences in each person's natural environment over a 21-day assessment period (using a daily diary methodology; Kashdan & Steger, 2006). There was evidence for complex relations between trait social anxiety, daily social anxiety, and how affect was handled on a given day. Of people classified as high in social anxiety, those reporting the most daily social anxiety and the greatest tendencies to suppress affective experiences on a given day reported 24% fewer positive events than other people classified as high in social anxiety. In addition, less anxious people with greater tendencies to be accepting of and willing to express



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emotions reported the most frequent positive events and positive affect in a given day. Thus, the most beneficial outcomes were not merely a result of low social anxiety but also how people handled their emotions.

As an extension of this work, my research laboratory conducted a prospective study to examine the relation between social anxiety and changes in positive affect over the course of a 3-month period (Kashdan & Breen, in press). Of particular interest was whether affect regulatory processes moderated the relation between social anxiety and changes in positive affect. Results showed that those people defined as low in social anxiety with a greater willingness to express positive emotions reported substantial increases in positive affect over time. Similar findings were found using tendencies to hide or conceal emotions as a moderator. Specifically, people defined as low in social anxiety with minimal tendencies to hide emotions also reported the greatest increases in positive affect over time. The results concerning the joint benefits of being low in social anxiety and emotionally expressive replicate the daily diary findings reported above. This work also suggests that emotion suppression and expression may be part of a single continuum.

The positive affective experiences of people with excessive social anxiety were not affected by tendencies to express or hide emotions. These individuals reported stable low levels of positive affect across time. This profile might reflect a floor effect. By using an adult sample, the erosive processes associated with social anxiety were more likely to have stabilized. Future work would benefit by examining the interactive influences of excessive social anxiety and affect regulatory processes on well-being during earlier life stages (when the onset of impairing social anxiety is more common) and during important and often stressful life transitions when mental health and social resources are more variable.

Together, these studies validate theoretical models suggesting that pathological outcomes and well-being are better understood by accounting for emotion vulnerabilities (in this case, social anxiety) as well as the ways in which emotions are understood, reacted to, and managed (Frijda, 1986; Mennin,

Heimberg, Fresco, & Turk, 2005). The daily diary results provide support for studying social anxiety and regulatory processes in tandem in everyday life to understand the mechanisms that lead people with excessive social anxiety to be more or less vulnerable to the frequency of and reactivity toward typically positive events. The assumption that people with excessive social anxiety are a homogeneous group can lead to erroneous conclusions. It appears that people who are more likely to conceal their socially anxious feelings are particularly vulnerable to impaired positive psychological functioning.

Summary

There is some evidence that social anxiety is associated with diminished positive experiences and infrequent positive events that cannot be explained by extensive comorbidity with depression. Yet, these relations appear to vary as a function of how people regulate their affect in everyday life. It will be important to conduct additional studies to explore the intriguing notion that high social anxiety in conjunction with tendencies to conceal and hide affective experiences leads to the greatest vulnerability and poorest outcomes. In addition, the experience of low social anxiety does not appear sufficient for the experience of frequent positive events and experiences. Failing to account for how people respond to and express emotions can lead to erroneous and misleading conclusions about how social anxiety operates and what processes are most promising as targets of intervention.

The integration of the positive spectrum of human functioning into the study and treatment of social anxiety is in its infancy. The current program of research can be extremely useful in future examinations of the behavioral and neurobiological processes associated with SAD, and sensitivity to particular stimuli and interventions.

Author Notes

This research was supported by National Institute of Mental Health grant MH-73937 to Todd B. Kashdan. Reprints of articles can be obtained at <http://mason.gmu.edu/~tkashdan/> or by sending an email to tkashdan@gmu.edu.

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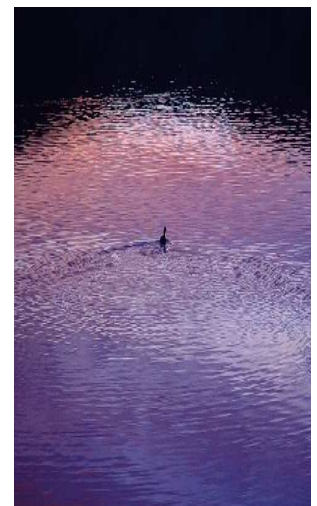
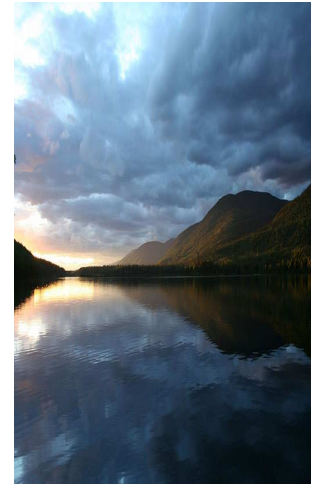


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Todd B. Kashdan, Ph.D. is an Assistant Professor in the clinical psychology department at George Mason University. He obtained his undergraduate degree from Cornell University in 1996 and his Ph.D. in 2004 from the State University of New York at Buffalo. He has published over 60 original publications in peer-reviewed journals or chapters in edited volumes that mostly focus on anxiety disorders, self-regulation, positive emotions, the role of human strengths in our daily lives, interpersonal relationships, and the assessment and cultivation of well-being, curiosity, gratitude, and meaning and purpose in life. His current research on social anxiety disorder and emotion regulation is funded by the National Institute of Mental Health. He is currently on the editorial boards of the *Journal of Anxiety Disorders*, *Journal of Research in Personality*, *Journal of Social and Clinical Psychology*, *Journal of Positive Psychology*, and *Self and Identity*. He has been teaching



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courses on positive psychology, the science of well-being, and abnormal psychology for over seven years. His research has been featured in several popular media outlets including a feature article in the *New York Times* ("Happiness 101", January 7,

2007), *Reader's Digest*, *The Washington Post*, *National Public Radio*, *Psychology Today*, *Prevention Magazine*, *Oprah Magazine*, *The Tavis Smiley Show*, *Talking with America*, and *Green America Radio*.

FEATURED ARTICLE

Psychophysiological Predictors of PTSD in Female Crime Victims

Cassidy A. Gutner^{1*}, Suzanne L. Pineles^{1,2}, Mariann R. Weierich^{1,2}, Patricia A. Resick^{1,2} & Michael G. Griffin³

¹ National Center for Posttraumatic Stress Disorder, Women's Health Sciences Division, VA Boston Healthcare System, Boston, MA, ² Boston University School of Medicine, ³ University of Missouri-St. Louis, Center for Trauma Recovery

*Now at Department of Psychology, Boston University

Elevated levels of autonomic arousal are a defining characteristic of posttraumatic stress disorder (PTSD) (Pitman & Orr, 1993; Yehuda, 1997). However, although many studies have examined the relationship between PTSD and physiological reactivity concurrently, little is known about longitudinal physiological predictors of PTSD. Additionally, much of the existing cross-sectional research has focused on male combat veterans limiting generalizability of these results. This study seeks to expand upon previous research by examining the relationship between physiological reactivity during an ideographic monologue procedure within one month of assault and the development of PTSD at three months post-assault in a sample of female assault survivors.

Method

In this study, Heart Rate (HR) was recorded during five phases of the procedure: 1) initial baseline; 2) monologue about a neutral topic; 3) second baseline; 4) monologue about the traumatic event; and 5) final baseline.

Participants

Participants were part of a larger assessment study designed to investigate the natural recovery patterns of female survivors of sexual and physical assault. One hundred and one women who experienced either a sexual ($n = 74$) or physical assault ($n = 27$) were recruited from a midwestern urban community. They were assessed at two time points: Time 1 (less than one month post-assault) and Time 2 (three

months post-assault). Participants were primarily single (49%), African American (64%) women with a mean age of 30.3 years ($SD = 8.6$; range = 18-54), and an average education level of 12.6 years ($SD = 2.3$; range = 2-20). During each assessment point, participants were administered the Beck Depression Inventory (Beck, 1961) and the Clinician-Administered PTSD Scale (Blake et al., 1990). Additionally, participants were asked to talk about the trauma memory and a neutral memory for five minutes each. These monologues were separated by baseline and recovery periods and heart rate was measured with Coulbourn equipment during the procedure.

Results

The average number of heart beats per minute was computed for each participant at each of the five phases of the study. The average HR levels were used to compute two dependent variables. Heart rate (HR) trauma reactivity was computed by subtracting average heart rate during the first baseline phase (phase 1) from average heart rate during the trauma phase (phase 4). This variable is defined as HR reactivity in response to discussing the trauma relative to baseline heart rate. HR neutral reactivity was computed by subtracting baseline HR (phase 1) from the neutral HR (Phase 2). This variable is defined as HR reactivity in response to discussing a neutral topic relative to baseline heart rate. Analyses were conducted on data from responders, who were defined as participants whose HR trauma reactivity significantly increased from baseline measurement to trauma phase measurement. Controlling for depression (i.e., BDI-II), a hierarchical regression was computed with HR trauma reactivity at Time 1 as a predictor of PTSD symptoms (CAPS) at Time 1. HR trauma reactivity at Time 1 was not significantly related to PTSD at Time 1 when controlling for depression (see Table 1). Another hierarchical regression was computed with HR reactivity at Time 1 as a longi-

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tudinal predictor of PTSD symptoms at Time 2. Controlling for initial depression and PTSD symptoms, there was a significant relationship between HR trauma reactivity at Time 1 and CAPS Severity at Time 2 (see Table 2). This relationship yielded a small effect size for the unique contribution of HR trauma reactivity ($sr^2 = .05$).

Conclusions

We prospectively examined the degree to which heart rate reactivity within one month of trauma predicts PTSD symptom severity three months post-trauma. HR reactivity during a trauma monologue within one month of the traumatic event predicted greater PTSD symptom severity at three months. This effect was above and beyond that of depression and total PTSD symptom severity at Time 1, suggesting that HR reactivity specific to a self-generated trauma monologue soon after the event offers a potentially valuable indicator of the degree to which individuals might experience continued symptom severity. Results from this study expand on previous research by illustrating the longitudinal relationship between physiological responsivity shortly after the experience of a trauma and the development of PTSD symptoms three months later.

There are several limitations to the current study including the notion that the intensity of idiosyncratic trauma monologues may vary among participants. However, past research has demonstrated that individuals' reactivity to personalized trauma-related stimuli to be more robust in response (Orr, Metzger, & Miller, 2004). Another potential limitation is related to the study sample consisting of only women, which may limit the generalizability of the results to male victims. However, most psychophysiological research has been conducted with male samples and research on female samples is necessary addition. Additionally, the current sample is relatively small and not nationally representative. While this may restrict generalizability, overall, the study is unique in terms of its longitudinal design and timing of the first assessment. Finally, although this study examined HR reactivity as it relates to changes in PTSD symptoms at a later time, it is important to note that it is not possible to infer causality.

Table 1
HR Reactivity Scores at Time 1 by CAPS Scores at Time 1

Outcome Step	β	$R^2/\Delta R^2$	Model F (df)
CAPS total severity at Time 1			7.27 (3, 43)***
1. BDI total	.57***	.33	
2. HR neutral responsivity	.04	.04	
HR trauma responsivity	.08		

*** $p < .001$

Table 2
HR Reactivity Scores at Time 1 by CAPS Scores at Time 2

Outcome Step	β	$R^2/\Delta R^2$	Model F (df)
CAPS total severity at Time 2			10.22 (4, 42)***
1. CAPS Severity at Time 1	.47**	.42	
BDI total Time 1	.25*		
2. HR neutral responsivity	-.002	.08	
HR trauma responsivity	.28*		

* $p < .05$, ** $p < .01$, *** $p < .001$

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Cassidy Gutner received her bachelor of art's degree from Skidmore College in 2004, with a major in Psychology and Neuroscience. She recently received her Master of Arts from Boston University in Psychology where she is currently pursuing a doctoral degree in Clinical Psychology. She is currently a member of the Translational Research Program and the Center for Anxiety and Related Disorders at Boston University and works under the mentorship of Dr.



...heart rate reactivity specific to a self-generated monologue soon after the event offers a potentially valuable Indicator of the degree to which individuals might experience continued symptom severity.

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Michael W. Otto. Her current research focuses on emotional memory consolidation and the involvement of the NMDA receptor. Prior to graduate school she worked as a Research Assistant in the Women's

Health Sciences Division at the National Center for Posttraumatic Stress Disorders under Dr. Patricia Resick.

FEATURED ARTICLE

Chronology of Onset of Anxiety and Mood Disorders among Adolescents with Eating Disorders

Natalie Castriotta¹, Maria Nazarian¹, Alyssa Epstein¹, Michelle Craske¹, Susan Mineka², Richard Zinbarg²

¹University of California, Los Angeles, ²Northwestern University

Comorbid relationships between eating, anxiety and mood disorders have been found in a number of studies (Keel, Klump, Miller, McGue, & Lacone, 2005). However, many of these studies have varying and conflicting results, often sampling from different populations and utilizing varying methodologies and exclusion criteria. Also, many study samples are made up of referred, clinical groups of eating disorder (ED) patients, neglecting to look at sub-clinical participants, as well as those not seeking treatment.

Several of the studies that found correlations among these disorders went on to examine the age of onset of anxiety disorders (ADs) among ED patients. Most of these studies found that ADs usually predate EDs (Kaye, Bulik, Thornton, Barbarich, & Masters, 2004; Godart, Perdereau, Jeammet, & Flament, 2005), but little research has examined the onset of mood disorders (MDs) within ED populations. Prior research has found that the median age of onset of ADs is much younger than the median age of onset for MDs (about 11 vs. 30 years old) (Kessler, Berglund, Demler, Jin, & Walters, 2005), and the average age of onset of EDs is sometime in adolescence (Godart et al., 2005).

The present study is a follow up to a previous study conducted investigating whether correlations exist between the various subgroups of EDs, ADs and MDs. Strong correlations between each of the three subgroups of EDs (Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder) were found within each of the subtypes of ADs and MDs. This study will examine the age of onset of each disorder, within individuals, to see if a general chronology of onset of these disorders exists among individuals

with EDs. In addition, the study will begin investigating whether prior AD or MD diagnoses could be risk factors for the development of EDs. Given the average age of onset of these disorders, we hypothesize that ADs will develop prior to EDs and that MDs will develop subsequent to the ED.

Methods

The participant sample was selected from the Youth Emotion Project, a longitudinal study examining common and specific risk factors for developing ADs and MDs. Participants were assessed using the Structured Clinical Interview for DSM IV (SCID) and were selected if they were given a full or NOS diagnosis of one of three subtypes of EDs (Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder). The ADs assessed were: panic disorder, obsessive compulsive disorder, generalized anxiety disorder, social phobia, specific phobias and post-traumatic stress disorder. The MDs assessed were: major depressive disorder, bipolar disorder (1 and 2) and dysthymia. Of the 322 participants assessed, 24 had a diagnosis of an ED.

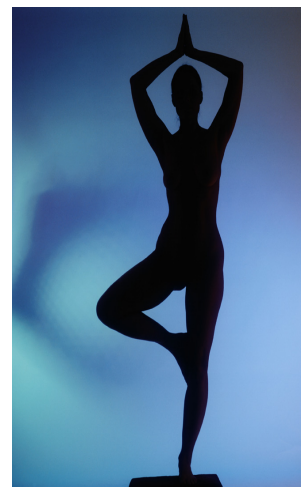
Results

Chi-square analyses were run to assess the rate of ADs and MDs among the participants with EDs. The results indicated that there were significantly more diagnoses of ADs within participants with EDs than within participants without EDs, $\chi^2 = 26.05$, $p < .001$, but there was not a significantly higher rate of MDs. Percentages were used to assess the chronology of onset for diagnoses because there was not enough power to complete regression analyses due to the low number of participants with EDs. Thus, in 85% of participants with an ED, a diagnosis of an AD predated the diagnosis of an ED. In 70% of participants with an ED, a diagnosis of a first depressive episode was given after the diagnosis of an ED.

Discussion

The results suggest that there is a significantly

The present study is a follow up to a previous study conducted investigating whether correlations exist between the various subgroups of eating disorders, anxiety disorders, and mood disorders.



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higher rate of ADs among participants with EDs than without EDs. However, the rates of MDs are similar across the ED and non-ED groups. Within the participants with EDs, the vast majority developed an AD before the start of their ED and experienced their first depressive episode subsequent to their ED diagnosis. These findings suggest that our hypothesis is supported. The primary limitation of this study and the findings is the small sample size of ED participants, which prevented us from running more sophisticated analyses. However, the prevalence of EDs in society is so low that this is a common limitation of ED studies in general. Possible implications of these findings are that there may be certain commonalities between people who develop ADs and EDs and that there may be common risk factors for both types of disorders, and/or ADs themselves may be risk factors for the development of EDs. This data also suggests that given the later onset of MDs, they may not be a risk factor for the development of EDs, although commonalities between the disorders may still exist. Follow up studies should investigate whether there is a predictive relationship among these disorders and possible common risk factors between them.

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Originally from San Diego, California, **Natalie Castriotta** completed her undergraduate degree at UC Berkeley, where she worked with Dr. Ozlem Ayduk in her Relationships and Social Cognitions Laboratory. Natalie completed her senior honors thesis with Dr. Ayduk and after graduating in the spring of 2005, she began working at UCLA with Dr. Michelle Craske in her Anxiety Disorders and Behavioral Research Program. Natalie will begin her graduate work this fall when she enters the clinical doctoral program at UCLA, where she will continue to work with Dr. Craske and pursue her interests in cognitive and psychophysiological risk factors for the development of anxiety disorders.



...there may be certain commonalities between people who develop anxiety disorders and eating disorders and there might be common risk factors for both types....

ANNOUNCEMENTS

We are seeking Anxiety SIG Poster submissions for the annual poster exposition at the ABCT convention! Abstracts should be a page or less and include all authors names and affiliations, as well as the contact information for the first author. For students (not yet having completed your doctoral training) who are first authors, please also indicate if you would like to be considered for one of the two \$250 student awards that are determined at the abstract exposition. We are extending the deadline for submission this year to July 25th--Abstracts can be emailed as word attachments or mailed directly to Amie Grills-Taquechel at:

Amie E. Grills-Taquechel, Ph.D.
University of Houston
Department of Psychology
126 Heyne Building
Houston, TX 77584-5022
aegrills@uh.edu

Please remember to pay your SIG dues--if you are unsure if you have paid for 2007, please contact us at anxsig@smu.edu and we can let you know. If you have not paid for 2007, you can either select to pay the complete amount for this year (\$5.00 student members, \$12 professional members) or pay our "special rate" which covers the remainder of 2007 AND the 2008 years (\$8 students, \$20 professionals). Thank you all for your continued support of our SIG!

ASSOCIATION FOR BEHAVIORAL AND COGNITIVE THERAPIES

The Anxiety Disorders Special Interest Group (ADSIG) provides a professional forum for exchanging information and ideas on the conceptualization, assessment, and treatment of anxiety. Members of the ADSIG share a common interest in cognitive behavior therapy and the study of variables and processes that contribute to the etiology, maintenance, and modification of anxiety-related disorders. Members also share an interest in promoting and disseminating state-of-the-art, basic and applied knowledge about anxiety and related disorders to other scientists, practitioners, and the general public.