Affective Considerations in Anxiety and Depression Comorbidity

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Abstract

Generalized anxiety disorder (GAD) and major depressive disorder (MDD) co-occur at rates much higher than chance. Because of overlapping risk factors and higher rates of comorbidity than other anxiety disorders, researchers have proposed reclassifying GAD; one of the most influential proposals calls for GAD and MDD to be classified together as anxious-misery disorders, with the remaining anxiety disorders reclassified as fear disorders. The tripartite model attempts to explain comorbidity of depression and anxiety through positive affect, negative affect, and physiological hyperarousal. However, its theory that low positive affect is exclusive to depression has been questioned – instead, low rates of positive affect are found in all anxiety disorders, especially in GAD. The current study examines positive affect in anxious-misery symptoms and fear symptoms to determine if positive affect varies in a manner consistent with the model and if it supports the reclassification of mood and anxiety disorders. Using a sample of adolescents and young adults (n=904), correlations and linear regression were conducted on positive affect and mood disorder symptoms. Symptoms of depression, generalized anxiety, social anxiety, and panic disorder each had significant negative correlations with positive affect. A regression analysis controlling for the overlapping variance among symptoms demonstrated that depression showed the strongest negative relationship with positive affect, followed by generalized anxiety and social anxiety. There was no significant relationship between positive affect and panic disorder symptoms. These findings support the close relationship between depression and generalized anxiety but also demonstrate that positive affect may not be adequate to differentiate anxious-misery and fear disorders.

Affective Considerations in Anxiety and Depression Comorbidity

There is a large amount of overlap between depression and anxiety disorders; anxiety disorders are found to have a lifetime comorbidity with major depressive disorder (MDD) in about half of all cases (Fava et al., 2000). Roughly one-third of people presenting with either depression or anxiety symptoms are diagnosed with a comorbidity of both (van Loo et. al, 2016). Though anxiety and depression symptoms co-occur frequently, the highest rates of comorbidity are found between generalized anxiety disorder (GAD) and MDD, with roughly 10% of people with depression also having a comorbidity with GAD (Fava et al., 2000). In addition to these high rates of co-occurrence, those with a comorbidity of any anxiety disorder with depression tend to have a more prolonged episode and are more likely to relapse within a shorter time frame than those with only one disorder (ter Meulen et al., 2021). Having comorbid MDD with an anxiety disorder also increases the number of self-reported symptoms for either disorder; this indicates that the comorbidity of depression and anxiety is correlated with increased severity for each disorder, relative to those without a comorbid depressive disorder (O'Neil et al., 2010). Despite increased severity and longer episodes, there has been little research conducted on the mechanisms that could underlie the increased comorbidity rates between anxiety and depression disorders, and specifically between GAD and MDD.

Symptom severity and presentation can occur differently in those with a GAD and MDD comorbidity than those who have either disorder separately. Baseline negative affect for both fear and sadness is higher in people with a comorbidity of GAD and MDD compared to those with only GAD or controls (Seeley et al., 2016). People with a GAD and MDD comorbidity or MDD alone also tend to have higher experience and memory of negative events and emotions than controls or those with GAD alone (Mathersul & Ruscio, 2019). Together, this again

indicates that people with a GAD and MDD comorbidity have more severity in their symptoms. Some research has been conducted to determine if there are shared factors that could explain the higher-than-chance rates of anxiety and depression comorbidity. For example, neuroticism is a shared risk factor for depression as well as all anxiety disorders (Andrews, 1996). There is substantial genetic overlap between depression and generalized anxiety, which can partially account for why the two disorders present together frequently (Kendler, 1996).

Due to the high rates of comorbidity between depression and generalized anxiety, as well as some shared risk factors, there is debate among clinicians and researchers regarding the classification of GAD as an anxiety disorder. There have been calls for GAD to be reclassified with MDD; however, generalized anxiety has been shown to have high reliability and validity as its own disorder (Mennin et al., 2008). Also refuting this idea are the shared similarities that generalized anxiety has with other anxiety disorders, such as physiological hyperarousal (Mineka et al., 1998). It has been proposed that depressive disorders and generalized anxiety should be grouped together to form a new class of symptoms labeled "distress" or "anxious-misery," with the remaining anxiety disorders being classified as "fear" disorders (Krueger, 1999; Mennin et al., 2008). One finding that supports this reclassification is that people with generalized anxiety endorse more worries about cognitive dyscontrol, similar to rumination in depression, than patients with other anxiety disorders, and this finding also holds for those who have anxiety disorders with a secondary depressive disorder (Rector et al., 2007). This suggests that there are shared elements of generalized anxiety with depression that distinguish GAD from the other anxiety disorders. The anxious-misery and fear proposal can also account for the fact that depression shares high rates of comorbidity with the other anxiety disorders, though the rates of comorbidity tend to be lower – fear and anxious-misery disorders are proposed to share a

common internalizing factor that could account for the high comorbidity rates between the two groups (Krueger, 1999). This proposal so far has some empirical support; however, more research examining affective differences and similarities among the anxiety disorders and depression is needed in order to determine whether reclassification would prove more beneficial or accurate than the current classification system in the DSM-5.

One of the most widely known and researched theories attempting to explain the high rates of comorbidity between depression and anxiety disorders is the tripartite model, first proposed by Clark and Watson (1991). In the model, Clark and Watson propose that comorbidity between depression and anxiety, also referred to as mixed anxiety and depression, is due to high levels of negative affect, the experience of negative emotions, and general affective distress. They assert that while depression and anxiety are both characterized by high levels of negative affect, depression is distinguished through low levels of positive affect, which can be related to anhedonia, an inability to feel pleasure. Anxiety, on the other hand, is described as having higher levels of physiological hyperarousal that is not seen in depression. The tripartite model has inspired a large amount of research on the topic of depression and anxiety comorbidity, and it has been expanded and revised as shortcomings and weaknesses have been discovered in the theory.

Positive affect reflects one's level of enthusiasm, alertness, and energy (Das et al., 2020). It is an independent concept from negative affect, and they are on separate continuums – low positive affect does not equate to having high general distress, but instead demonstrates an inability or infrequency of experiencing positive emotions (Watson et al., 1988). Low positive affect can also be thought of as anhedonia, a classic symptom of depression, which aligns with the tripartite model's prediction that low positive affect distinguishes depression from the anxiety

disorders. Life satisfaction, an element of positive affect, is found to be strongly negatively correlated with depression; similar to low positive affect, low life satisfaction is present in those with depression but not necessarily in those with anxiety disorders (Headey et al., 1991).

However, research on positive affect in anxiety disorders has been mixed, and frequently contradicts the tripartite model's assertion that low positive affect is not found in anxiety disorders. Low rates of positive affect are related to symptom severity in generalized anxiety and social anxiety disorder (SAD); positive affect can also serve as a protective buffer for the onset or development of depressive, GAD, or SAD symptoms during periods of stress (Sewart et al., 2019). This indicates that positive affect has a larger role to play in the development and severity of at least some anxiety disorders. Positive affect is a stronger predictor than negative affect of quality of life and life satisfaction in those with GAD; this indicates that those experiencing more severe symptoms with a lower quality of life also experience lower positive affect, like those with depression (Das et al., 2020). Eisner et al. (2009) also found moderate associations suggesting dampening of positive affect within all anxiety disorders, even after controlling for life history of depression. Together, this provides a mixed picture of how positive affect functions within anxiety disorders and depression. Low positive affect has clear associations with depression and seems to play an important role in anxiety disorders. There is some research examining whether positive affect scores differ among the anxiety disorders, but it is limited in its scope and it remains unclear whether low positive affect in anxiety could contribute to risk for developing depression as a comorbidity.

The other two facets of the tripartite model, negative affect and physiological hyperarousal, do not have as much variability across the anxiety disorders as positive affect. Watson and Clark (1984) describe negative affect as relating to one's negative mood and self-

concept, and that it is generally stable over time. Negative affect is strongly correlated with neuroticism, a personality trait described as a general disposition for experiencing negative emotions, and neuroticism is able to predict levels of negative affect in people with anxiety or depression (Khoo et al., 2020). Because neuroticism levels are high in those with any anxiety disorder or depression, but highest in those who have GAD with a depression comorbidity, it is apparent that negative affect plays an important role in anxiety and depression as the model suggests (Weinstock & Whisman, 2006). However, neuroticism and negative affect are associated with many common mental disorders and are thought to serve as general risk factors for developing psychopathology (Ormel et al., 2013). Therefore, neuroticism may not be important specifically to comorbidity with GAD and depression. Physiological hyperarousal, on the other hand, seems to be primarily related to panic disorder, rather than all the anxiety disorders as proposed by the tripartite model (Brown et al., 1998).

When using the tripartite model and its three facets - positive affect, negative affect, and physiological hyperarousal - to contribute to the classification argument regarding GAD, researchers have also found conflicting results. One study proposed that the tripartite model should be expanded to include five facets rather than three to distinguish depression more reliably from anxiety: depressed mood, low positive affect, somatic arousal, phobic fear, and hostility (den Hollander-Gijsman et al., 2009). In this study by den Hollander-Gijsman et al. (2009), GAD did not have high scores on phobic fear, unlike the other anxiety disorders. This supports the idea of reclassifying GAD with depression as anxious-misery, and grouping the remaining anxiety disorders as fear, because of their shared propensity for phobic fear (Krueger, 1999). Another study pointed to hierarchical connections of positive affect and negative affect to depression and each anxiety disorder as evidence of strong comorbidity between the two groups;

they also found that negative affect was correlated strongest for depression and generalized anxiety (Brown et al., 1998). While this could potentially serve as more evidence favoring the anxious-misery versus fear model, it is also likely that negative affect is a risk factor for all the anxiety disorders, considering that each anxiety disorder in this study was found to have high rates of negative affect.

Despite the tripartite model and the anxious-misery versus fear model being extremely influential in the field of research on anxiety and depression comorbidity, research drawing on both has not been conducted widely before. Specifically, research involving positive affectivity in the context of co-morbidity between GAD and MDD and across the anxiety disorders remains sparse, with mixed findings. The purpose of the current study is to examine whether there are differences in positive affectivity between the anxiety disorders and depression, and if so, whether this relationship is more characteristic of GAD and MDD than the other anxiety disorders, supporting the classification of GAD and MDD together. It is expected that low positive affect will have stronger associations with symptoms falling under the anxious-misery subcategory (generalized anxiety and depression symptoms), compared to symptoms under the fear category (social anxiety and panic symptoms).

Method

Participants

Data are from a previously collected cross-sectional data set of 904 participants. While the age range of the study allows for those 12 years and up, the sample is predominantly college age. A battery of self-report measures was collected through an online survey in REDCap, which is a secure, HIPAA-compliant survey distribution platform. Participants received either monetary compensation or course credit for their participation. All study procedures were approved by the

Vanderbilt institutional review board. Seven participants are missing data for age; otherwise, there are no missing values on any of the other measures of interest. Table 1 shows demographic characteristics of the sample. The sample was predominantly White and female; the majority had less than two years of college education and were from an upper-class background.

Measures

The Positive Affect Scale (PAS; Salsman et al., 2014) is a self-report measure designed for the National Institute of Health's Toolbox for the Assessment of Neurobiological and Behavioral Function, and it consists of nine questions. Each question has five possible responses: *not true*, *somewhat true*, *very true*, *refuse to answer*, or *don't know*. In an assessment of the NIH's positive well-being measures, Salsman et al. (2014) compared the PAS to other conceptualizations of positive affect and found that the scale sufficiently measures the concept of positive affect and justifies using a single score result.

The Beck Depression Inventory - II (BDI-II; Beck et al., 1996) is a self report measure that assesses clinical symptoms of depression, and it consists of twenty-one questions. Each question is scored from 0-3; zero means that the statement does not apply to the person at all, while three means that the statement is extremely applicable. The possible scores can range from 0-63. Scores from 0-16 are considered mild, scores 17-30 are moderate, and scores over 30 are considered severe. According to the manual, a score of 17 or higher indicates that an individual may meet criteria for a depressive disorder (Beck et al., 1996). The BDI-II has been shown to have high test-retest reliability and strong convergent and divergent validity, and pilot testing among psychiatric patients with known depression demonstrated its validity as a measure of depression (Beck et al., 1996).

The Generalized Anxiety Disorder 7-item Scale (GAD-7; Spitzer et al., 2006) measures self-report symptoms occurring over the last two weeks related to generalized anxiety, and it contains seven questions. Answers for each question are rated on a scale of 0-3, reflecting how frequently each symptom occurs. An answer of 0 means *not at all*, an answer of 1 means *several days*, an answer of 2 means *over half the days*, and an answer of 3 means *almost every day*. Scores can range from 0-21. At the end of the questionnaire, participants are asked how difficult these symptoms have made it for them to participate in daily activities. Possible answers are *not difficult at all*, *somewhat difficult*, *very difficult*, and *extremely difficult*. During the creation of this questionnaire, Spitzer et al. used a large sample and factorial analysis to choose the specific questions. They found that the GAD-7 has high reliability and validity, and it is distinct and independent from measures assessing depressive symptoms (Spitzer et al., 2006).

The Social Phobia Inventory (SPIN; Connor et al., 2000) measures self-report symptoms relating to social anxiety that have bothered the participant in the last week, and it consists of 17 questions. Each question can be answered on a scale of 0-4; 0 means *not at all*, 1 means *a little bit*, 2 means *somewhat*, 3 means *very much*, and 4 means *extremely*. Scores can range from 0-68, and the inventory states that a score of 19 or higher with distress suggests a diagnosis of social anxiety disorder, though this cannot be confirmed without a clinical diagnosis from the DSM-5. According to the inventory, scores less than 20 equate to low or no severity, scores from 21-30 suggest mild severity, scores from 31-40 indicate moderate severity, scores from 41-50 suggest severe symptoms, and scores of 51 or higher indicate very severe symptoms. After administering the SPIN to three clinical groups and two control groups, Connor and colleagues found that the questionnaire had strong validity and reliability as a measure to assess social anxiety, and factor analysis revealed that the inventory covers five factors that have previously been identified in

those with social phobia: social inadequacy, avoidance of embarrassment and criticism, physiological symptoms, social inferiority, and avoidance of attention on oneself (Connor et al., 2000). Overall, the inventory has very good psychometric properties.

The Panic Disorder Severity Scale (PDSS; Shear et al., 1996) is a self-report form that measures symptoms and experiences relating to panic attacks or limited symptom attacks within the last week. They define panic attacks as peaking within 10 minutes with at least 4 or more listed symptoms, while limited symptom attacks include fewer than four symptoms. The scale consists of seven questions, with answers ranging from 0-4; 0 means *not at all*, 1 is *mild*, 2 is *moderate*, 3 is *severe*, and 4 is *extreme*. Scores can range from 0-28, and scores of 9 or greater are considered clinically significant. In the study conducted by Shear et al. (1996), the measure has good test-retest reliability, interrater reliability, and convergent and divergent validity. However, internal consistency was only modest, though this could be due to restrictive sample selection.

Data Analyses

Analyses were conducted using RStudio statistics software (version 4.2.2). No data were missing within the variables of interest. Analyses were conducted in two steps. First, bivariate correlations between the Positive Affect Scale (PAS) and all symptom measures (Generalized Anxiety Disorder 7-item scale (GAD-7), Beck Depression Inventory-II (BDI-II), Social Phobia Inventory (SPIN), and Panic Disorder Severity Scale (PDSS)) are reported to determine the relationships between symptoms of each disorder and levels of positive affect. Second, multiple linear regression was used to test which symptom measures are most strongly associated with positive affect while controlling overlapping variance between disorders, using the anxiety and

depression measures as predictors of positive affect. The regression model is as follows: positive affect = GAD-7 + BDI-II + SPIN + PDSS.

Results

Table 2 shows the means, standard deviations, and ranges for all measures of interest. Table 3 demonstrates the number and percentage of the sample that met clinical criteria cutoffs for each disorder being investigated. In this study, it was predicted that higher rates of positive affect would be associated with lower rates of depressive and generalized anxiety symptoms. To test this, correlations were run between positive affect and each symptom measure. The results supported this prediction between positive affect scores and depressive and generalized anxiety symptoms, with strong negative correlations, but the results also demonstrated similar findings with social anxiety symptoms. Panic disorder symptoms also showed a significant correlation with positive affect, though it was weaker compared to the other symptom measures (Table 4). It was also predicted that depression and generalized anxiety would be significantly correlated with each other. While this was found to be true, similar results were obtained for social anxiety and panic disorder with depression, indicating a general overlap between depression and anxiety disorders. Correlations are limited because they are examined for each pair of variables separately; therefore, they do not account for the shared variance among symptom measures.

To investigate the specificity of the effect of symptoms of anxiety and depressive disorders on positive affect, a multiple regression was conducted in order to determine if the relationship between generalized anxiety symptoms and positive affect was stronger than the other anxiety disorders. A regression with anxiety and depression symptoms (GAD-7, SPIN, PDSS, and BDI-II) as predictors of positive affect revealed that positive affect was negatively associated with depression symptoms as expected ($\beta = -0.22$, $SE = 0.018$, $t(899) = -12.53$, $p <$

0.001). In other words, greater depressive symptoms predicted less positive affect. A negative association was also found between positive affect and generalized anxiety symptoms ($\beta = -0.13$, $SE = 0.034$, $t(899) = -3.74$, $p < 0.001$) as well as with social anxiety symptoms ($\beta = -0.04$, $SE = 0.012$, $t(899) = -3.38$, $p < 0.001$). This means that both greater generalized anxiety symptoms and greater social anxiety symptoms predicted less positive affect. However, the effect was stronger for generalized anxiety symptoms. Based on comparison of the betas, which are standardized effect sizes, it is evident that positive affect showed a stronger relationship with generalized anxiety symptoms ($\beta = -0.13$) than social anxiety symptoms ($\beta = -0.04$). No significant relationship was found between positive affect and panic disorder symptoms ($\beta = 0.01$, $SE = 0.037$, $t(899) = 0.16$, $p = 0.87$). Overall, internalizing disorders explained a significant proportion of variation in positive affect scores ($R^2 = 0.39$, $F(899) = 144.9$, $p < 0.001$).

Discussion

The goal of this study was to investigate whether positive affect levels vary across anxiety disorders and depression, and if they vary, whether they do so in a manner that reflects the theorized distinction between anxious-misery (depression and generalized anxiety) and fear (social anxiety and panic disorder) symptoms. Another goal was to determine if the tripartite model's hypothesis that low positive affect is exclusive to depression and not present in anxiety disorders would be supported by the data, or if low positive affect is a commonality amongst all internalizing disorders, as there are mixed findings about this in the literature.

Our findings of significant correlations between positive affect and each symptom measure investigated somewhat matched theories of comorbidity present in the literature. The tripartite model predicts that depression is unique from other internalizing disorders in displaying low positive affect (Clark & Watson, 1991). Previous data have shown mixed findings regarding

this; however, many prior studies suggest that low positive affect is found across all internalizing disorders. In the current study, the strongest effect found in the data was the negative correlation between positive affect and depression symptoms. Social anxiety and generalized anxiety symptoms demonstrated a weaker but still moderate negative correlation with positive affect. Panic disorder also had a moderate correlation, but it was much smaller than the other disorders. In order to support the recategorization of internalizing disorders under an anxious-misery/fear model, it would be expected that the relationship between positive affect and depression would be more similar to generalized anxiety than social anxiety or panic disorder. However, this was not found to be the case with correlational analyses; instead, generalized anxiety and social anxiety symptoms shared a remarkably similar correlation with positive affect. It should be noted that bivariate correlations cannot adequately test our hypotheses alone because such tests do not account for the high comorbidity across all internalizing symptoms. This considerable degree of overlap is demonstrated by the high correlations found between all symptom measures in the current study. The highest correlation was found between depression and generalized anxiety, supporting the high rates of comorbidity found between these two disorders in epidemiological studies (van Loo et al., 2016). Significant correlations were also found in every combination of internalizing disorders, with the strongest shown in combination with depression. This is similar to previous findings showing that there is large overlap between internalizing disorders, with high chance of comorbidity (Fava et al., 2000). As a result of the high degree of shared variance between internalizing symptoms, an alternative approach was needed to test the hypotheses.

To disentangle this overlapping variance, multiple regression analysis was used with depression and anxiety symptoms set as predictors of positive affect. This was done to further understand the relationship each internalizing disorder has with positive affect, without the

interference of shared variance across the internalizing disorders. Overall, the model demonstrated that anxiety and depressive symptoms explain a substantial amount of variance in positive affect. Depression was the strongest predictor of positive affect, as expected, with greater depressive symptoms predicting lower positive affect. Generalized anxiety and social anxiety symptoms also showed significant negative relationships with positive affect. No effects were found for panic disorder. Importantly, our hypothesis that generalized anxiety would show a stronger relationship with positive affect than the other anxiety disorders was supported. In examining the effect sizes from our regression model, we found that generalized anxiety had a stronger relationship with positive affect than social anxiety symptoms. This suggests that generalized anxiety is more similar to depression than the other anxiety disorders in terms of positive affect, which supports the reclassification of generalized anxiety with depressive symptoms. However, our results also suggest that while generalized anxiety and depressive symptoms share low positive affect in common, this relationship was not unique to depression and generalized anxiety. Social anxiety is also associated with low positive affect, albeit to a lesser degree than generalized anxiety. These results suggest that the construct of positive affect may not sufficiently differentiate between distress and fear disorders, but there is still merit in considering the reclassification of generalized anxiety disorder with the depressive disorders.

If one anxiety disorder were to be considered distinct from the rest based on the data, it would be panic disorder symptoms, which had markedly weaker correlations than the other symptom scales with positive affect. Our findings could reflect previous studies that reveal differences between panic disorder from the other anxiety disorders. Much more physiological arousal has been found in panic disorder that is not present in the other anxiety disorders (Brown et al., 1998). In addition to this, anxiety sensitivity regarding physical symptoms was

significantly higher in participants diagnosed with panic disorder compared to participants diagnosed with either generalized anxiety or social anxiety (Rector et al., 2007). If panic disorder and social anxiety should both be classified as fear disorders, then it would be expected for literature to support similarities between the two. Because of this, there is a possibility that panic disorder is different from the rest of the anxiety disorders, and should be classified in its own category. Another explanation of the results from this study could be that only a small percentage of participants met clinical criteria for panic disorder, as shown in Table 3. The null results in this data may be due to insufficient panic symptoms in this sample. Future studies need to replicate this effect in a sample with greater panic symptoms before conclusions can be made about the null results in this study.

The current study has both strengths and limitations. Strengths include the large sample size, the use of dimensional measures of symptoms, and collecting data on several internalizing disorders in the same participants. However, external validity of this study is limited because the data was drawn from a sample of adolescents and young adults; replication with a wider range of ages is needed in order to generalize conclusions to other ages, such as older adults or children. Our sample was also predominantly from an upper-middle class background, female, and college-educated, which provides some limitations in how well the data and findings of this study can be applied to the general population. Internal validity is high, however; all inventories and questionnaires used had high reliability and validity demonstrated through scientific studies, adding confidence that the variables of interest in this study were measured accurately and consistently across participants. In addition to this, the method of data collection was through self-report outside of the laboratory, eliminating the possibility of experimenter bias or systematic interference of outside variables. Finally, future work would benefit from replicating

these findings in a sample with a greater severity of clinical symptoms, especially for panic disorder.

Further research on how positive affect functions in anxiety disorders could also inform potential treatments to address these symptoms. Treatments for internalizing disorders often focus on relieving symptoms related to negative affectivity, but research shows that common treatments for both depression and anxiety disorders also increase positive affectivity to some extent in addition to lowering negative affectivity (Tirpak et al., 2019). By conducting more research into how positive affectivity functions across internalizing disorders, and whether there are similarities or differences in how this occurs in each disorder, treatments can become better informed and tailored to treating specific disorders. This could also perhaps lead to the creation of new treatments that specifically target positive affectivity. If low positive affectivity is found to be a common risk factor across internalizing disorders, then perhaps addressing this specifically in patients with comorbid disorders could lead to better outcomes.

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Table 1

Summary of Demographic Characteristics of the Sample (N = 904)

	Mean	SD
Age (years)	19.74	2.64

	N	%
Gender		
Female	648	71.68
Male	256	28.32
Race		
American Indian / Native Alaskan	3	0.33
Asian	231	25.55
Native Hawaiian or Other Pacific Islander	3	0.33
Black or African American	103	11.39
White	492	54.42
More than one race	63	6.97
Other	9	1.00
Ethnicity		
Hispanic or Latino	95	10.51
Not Hispanic or Latino	809	89.49
Household Annual Income		
$31,000 or less	43	4.76
$31,001-$42,000	61	6.75
$42,001-$126,000	297	32.85
$126,001-$188,000	189	20.91
$188,001 or more	314	34.73
Education		
Currently enrolled in middle/junior high school	8	0.89
Currently enrolled in high school	8	0.89
Didn't finish high school, but completed a technical or vocational program	1	0.11
High school graduate or GED	106	11.73
Completed high school and a technical or vocational program	6	0.66
Less than 2 years of college	449	49.67
2 years of college or more, including associate degree or equivalent	165	18.25
College graduate	141	15.60
Master's degree, or other post-graduate training	13	1.43

| Doctoral degree | 7 | 0.77 |

Table 2

Means, Standard Deviations, and Ranges for Measures of Interest

	M	*SD*	Range
PAS	19.39	4.67	9-27
BDI-II	12.22	9.76	0-58
GAD-7	6.69	5.13	0-21
SPIN	22.21	13.35	0-66
PDSS	1.78	3.83	0-26

Note. PAS = Positive Affect Scale; BDI-II = Beck Depression Inventory, Second Edition; GAD-7 = Generalized Anxiety Disorder, 7-Item Scale; SPIN = Social Phobia Inventory; PDSS = Panic Disorder Severity Scale.

Table 3

Percentage of the Sample that Meets Clinical Cutoffs for Each Symptom Measure.

	N	%
Depressive Disorder	254	28.1
Generalized Anxiety Disorder	232	25.66
Social Anxiety Disorder	500	55.31
Panic Disorder	76	8.41

Table 4

Correlations Between the Measures of Interest.

Variable	1	2	3	4	5
1. PAS	-				
2. BDI-II	-0.61***	-			
3. GAD-7	-0.49***	0.67***	-		
4. SPIN	-0.41***	0.51***	0.47***	-	
5. PDSS	-0.29***	0.42***	0.51***	0.27***	-

Note. $* \ p \leq .05$; $** \ p \leq .01$; $*** \ p \leq .001$