

**THE INVESTIGATION OF ANXIETY SENSITIVITY AND ITS RELATIONSHIP  
WITH ATTACHMENT AMONG A COLLEGE POPULATION**

**A THESIS**

**PRESENTED TO THE  
DEPARTMENT OF PSYCHOLOGY  
WESTERN ILLINOIS UNIVERSITY**

**IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR DEPARTMENTAL HONORS**

**BY**

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**SPRING 2007**

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May 12, 2007

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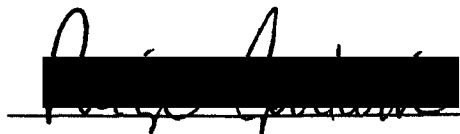
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## Acknowledgements

I wish to acknowledge the valuable guidance and direction given to me by the faculty sponsor of this project, Dr. Robert C. Intrieri, Ph.D. I also wish to acknowledge the assistance of Dr. Paige Goodwin Ph.D. as a second reader in this project. Dr. Charles Spielberger, Dr. Armsden, Dr. Greensburg, and Dr. Chris Fraley should also be mentioned for their contributions in allowing the use of their measures in this thesis. Lastly, I would like to recognize my parents, Ross and Marlene Margentina for their encouragement and support throughout this project.

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Running Head: ANXIETY SENSITIVITY & ATTACHMENT

**The Investigation of Anxiety Sensitivity and its Relationship with Attachment**

**Among a College Population**

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### Abstract

The prevalence of anxiety has led to the investigation of anxiety sensitivity as a predictor of future psychopathologies. This notion has fueled an examination of a relationship between attachment styles and anxiety sensitivity in a sample of 76 college students from the Western Illinois University population. The Experiences in Close Relationship-revised (ECR-R; Fraley, Waller & Brennan, 2000) was used to categorize participants into four attachment styles: secure, fearful, preoccupied, and dismissive. These categories were validated by the Inventory of Parent and Peer Attachment scale (IPPA; Armsden & Greenberg, 1989). Anxiety Sensitivity was evaluated by the Anxiety Sensitivity Index (ASI, Peterson & Reiss, 1992) and was validated by the State Trait Anxiety Inventory –State and Trait scales (STAI-T; Spielberger, et al., 1983). Lastly, the Panic Disorder Severity Scale (PDSS; Shear, et al, 1997) was implemented to explore participants that may have a vulnerability to acquiring Panic Disorder in the future. Results in this study supported the hypothesis that individuals that are fearful or preoccupied in attachment had higher levels of anxiety sensitivity than individuals in secure and dismissive attachment. Lastly, the Panic Disorder Severity Scale highlighted those individuals with high anxiety sensitivity as individuals that may be at risk for psychopathologies. The Investigation of Anxiety Sensitivity and its Relationship with Attachment Styles



The Investigation of Anxiety Sensitivity and its Relationship with Attachment Styles  
Among a College Population

Introduction

Anxiety Sensitivity (AS) is the fear of anxiety-related sensations that involve increased vigilance for anxiety-related symptoms as well as the interpretation of catastrophic outcomes. Anxiety sensitivity is considered a risk factor for the development of anxiety disorders and psychopathology. High levels of Anxiety Sensitivity increase the risk for acquiring future mental disorders including Panic and Anxiety disorders as well as Depression. Anxiety Sensitivity is a factor that assesses the likelihood of individuals developing mental health disorders and is important in the etiology and maintenance of anxiety disorders. Initially, Anxiety Sensitivity was considered a unidimensional construct. However, further research has suggested a number of multidimensional lower order factors. As a result, three dimensions have been identified. *Physical Concerns* reflect concerns about physiological anxiety sensations, *Psychological Concerns* reflect cognitive incapacitation in which fear may affect how cognitions are produced, and *Social Concerns*, reflects publicly observable anxiety reactions and loss of emotional control (Zinbarg, Barlow, & Brown, 1997). Comparative research suggests that the use of a unidimensional model of Anxiety Sensitivity is less effective for identifying individuals at risk for mental disorders because it neglects the different dimensions of Anxiety Sensitivity. Using a unidimensional approach, individuals are categorized as having Anxiety Sensitivity or not having Anxiety Sensitivity. In contrast, use of a multidimensional hierarchical model allows for an evaluation of the level of Anxiety Sensitivity as well as different types of Anxiety Sensitivity to better understand and predict the future outcome of anxiety mediated psychological disorders. Individual differences in Anxiety Sensitivity appear to effect an interaction between

genetic or biological influences with environmental dimensions. For example, Muris, Merkelbach, and Meesters (2001) suggested that the greatest amount of variance in Anxiety Sensitivity is attributable to environmental influences (55%). More specifically, it has been suggested that childhood learning experiences play a role in the development of heightened Anxiety Sensitivity. Muris et al. (2001) found that individuals high on the Anxiety Sensitivity Index also reported significantly more instrumental, vicarious, and informational learning experiences related to anxiety symptoms. Stein, Jang, and Livesley (1999) examined monozygotic and dizygotic twins and found Anxiety Sensitivity had strong heritable components accounting for forty-five percent of the variance in individuals. Based upon this work the interaction between the individual and the environment is quite important.

The suggestion that Anxiety Sensitivity has strong roots in the environment has led to speculation that specific elements of the environment such as Parental Attachment may have an underlying connection to Anxiety Sensitivity. Weems, Silverman, Berman, & Saavedra (2001), identified an association between negative cognitive errors or response styles and anxiety sensitivity. Insecurely attached individuals have been described as having negative cognitive response styles which may cause them to engage in distorted ways of interpreting information. If insecurely attached individuals distort information, there may be a link between attachment and how they interpret information, or Anxiety Sensitivity. In other words, the likelihood that insecurely attached individuals would distort bodily sensations increases. Therefore those individuals that would distort bodily sensations would likely increase their chances of experiencing higher levels of Anxiety Sensitivity based on Anxiety Sensitivity's connection to misinterpretations of sensations. This notion has led to research exploring the relationship between Anxiety Sensitivity and attachment styles.

Attachment Theory has been explored as one possible causal influence on Anxiety Sensitivity. Attachment Theory (AT), as first described by Bowlby (1977) concerned the tendency of humans to seek strong and enduring affectionate bonds with specific others. Bowlby argued that attachment characterized human experience from the cradle to the grave (1982). Bowlby hypothesized there were four distinguishing characteristics of attachment; *proximity maintenance* which reflects the desire to be near the people they are attached to, *safe haven* which refers to the tendency to return to the attached figure for comfort and safety, *secure base* or the attachment figure acting as a base for security, and lastly *separation distress* in which anxiety occurs in the absence of the attachment figure. According to Attachment Theory, early childhood parental attachment relationships are stable and influence how the individual sees themselves and others later in life (Brennan, Clark, & Shaver, 1998). Childhood experiences are believed to be responsible for individual differences in Anxiety Sensitivity especially in relation to parental behaviors which may be etiologic in development of Anxiety Sensitivity (Scher & Stein, 2003). Analyses by Scher and Stein (2003), revealed that exposure to threatening parental behaviors indicate a caregiver may not be physically or emotionally available when needed, may lead the individual to feel they are unlovable. Furthermore, Anxiety Sensitivity may act as an important mediator between early parenting experiences and both current and past emotional distress (Scher & Stein, 2003).

Investigating the relationship between adult attachment and anxiety, has led to a hypothesis that adult attachment is directed by the same motivational system that close emotional bonds between parents and their children are. These similar bonds are then often imposed on adults in their intimate relationships. Both are similar in that they characterize the notion of threatening behaviors in which individuals fear that the other person will not be there physically

or emotionally when needed. Hazan and Shaver (1987) found that infants and their caregivers, just like adult romantic partners, shared numerous features in common including both feel safe when the other is nearby, both engage in intimate bodily contact, both feel insecure when the other is inaccessible, both share discoveries with one another, and both engage in “baby talk”, a soft and encouraging language. Although infant attachment may be viewed as a predictor of one’s later intimate relationships, it is debatable whether the dimensions found from intimate relationships are comparable to those dimensions found in infant attachment. This may partly be due to the lack of evidence that other variables are not investigated as factors in attachment.

Within Attachment Theory, special attention has been given to attachment behaviors in the context of separation. Adult attachment and the transition to college represent one key example of separation. Young adults who are securely attached to parents should be able to successfully remove themselves from parent dependency and gain self efficacy. Further, these young adults should be able to transfer their secure attachment to other relationships. Individuals that are insecurely attached to parents may be unable to handle the separation from parents, making transition to college and the establishment of other relationships difficult to sustain. Mary Ainsworth expanded Bowlby’s work in her famous study, *The Strange Situation* (Ainsworth et al., 1978). She assessed infant attachment by investigating infants’ reactions to separation from the attachment figure. In this experiment, an unfamiliar person interacts with the infant and two brief situations in which the attachment figure leaves. The goal is to induce stressors which will activate attachment behaviors such as crying. What is examined is how infants explore the unfamiliar setting while measuring the infant’s need for reassurance from the attachment figure. It was Ainsworth’s observations in the *Strange Situation* that causes her to identify only three categories of attachment. Whereas Bowlby used Bartholomew’s division of

attachment into four categories: Secure (low anxiety about rejections and low in interpersonal distrust), Fearful (high in anxiety about rejection due to feelings of unworthiness and high in interpersonal distrust and avoidance), Preoccupied (high in anxiety of rejection because of unworthiness but low in distrust), and Dismissive (low in anxiety of rejection and high in distrust and avoidance). Ainsworth, however, divided attachment styles into three categories which included Secure Attachment while the child protested the mother's departure he or she quieted promptly upon the mother's return, accepting comfort from her before returning to exploratory behavior, then the child's relationship to the mother would be classified as a secure attachment.

**Ambivalent Attachment** - If the child showed sadness on the mother's departure, ability to be picked up by the stranger and even 'warm' to the stranger, and on the mother's return, some ambivalence, signs of anger, reluctance to 'warm' to her and return to play, then this child would be classified as ambivalent, and **Anxious-Avoidant**: If the child showed little to no signs of distress at the mother's departure, a willingness to explore the toys, and little to no visible response to the mother's return, then the child-mother relationship would be classified as avoidant. Ainsworth differed with Bowlby in the fact that she believed maternal sensitivity fostered the secure attachment. Weems, Berman, Silverman, & Rodriguez (2002) found that Anxiety Sensitivity varied across the four attachment categories (Secure, Fearful, Preoccupied, and Dismissive), with individuals labeled as insecurely attached (Fearful) found to have significantly higher Anxiety Sensitivity levels compared to securely attached individuals.

Weems, Berman, Silverman, & Rodriguez (2002) also investigated the relation between Attachment style and clinically significant levels of Anxiety Sensitivity, in concluding that individuals identified as Fearful or Preoccupied attachment were significantly more likely to have clinically significant levels of Anxiety Sensitivity (and be at risk for panic disorder,

### *Hypotheses*

*Hypothesis 1 A:* Individuals who are Insecurely attached or have Preoccupied attachment (Bartholomew's attachment style categories) will have significantly higher Anxiety Sensitivity than Securely attached individuals.

*Hypothesis 1 B:* Individuals with Secure or Dismissive parental attachments will have lower anxiety sensitivity than insecurely attached (Fearful and Preoccupied) individuals.

*Hypothesis 2:* Individuals' attachment style toward parents will be similar to their type of attachment to peers.

*Hypothesis 3:* Participants categorized as high on the Anxiety Sensitivity Index will have higher levels of State Trait Anxiety as well as high Panic symptomatology based on the Panic Disorder Severity Scale.

### Method

#### *Participants*

Participants were 76 Western Illinois University students (75 undergraduate students and 1 graduate student; 30 males and 46 females) recruited from two distinct areas: Western Illinois University Psychology Department's Undergraduate research pool and the general university community. Students involved in this research ranged in age from 18-24. Students received class credit for their participation at the discretion of their instructor.

#### *Measures*

*Experience in Close Relationships* (ECR-R; Fraley, Waller & Brennan, 2000). The ECR-R is a 36-item self report measure of attachment. Each item utilizes a 7-point Likert scale (disagree strongly to agree strongly). The ECR-R measure has two subscales: *Model of Self* and *Model of Others*. *Model of Self* indicates anxiety of rejection from others and thoughts of

agoraphobia, PTSD, and other Anxiety disorders). In contrast, Austin, Jamieson, Richards, & Winkelman (2006) investigated the relationship among attachment style, Anxiety Sensitivity, and Interpretive bias among non clinical panickers, and found no significant difference in Anxiety Sensitivity between securely or insecurely attached individuals. This study may support the notion that anxiety-related misinterpretation of ambiguous somatic sensations precedes the onset of panic disorder.

Adult Attachment is an under-investigated area of inquiry; however, emerging research suggests early attachment relationships have a profound impact on how adult relationships are viewed and experienced. It is clear that parent-child attachment influences children's behaviors, attitudes, self esteem, and anxieties. Further, lasting influences can also be seen in the individual's relationships with romantic partners, their own children, and the likelihood of acquiring anxiety and other mental disorders. Essentially what we learn when young can have an impact throughout the lifespan. With this knowledge we can get closer to understanding the etiology and maintenance of Anxiety Sensitivity to prevent the escalation of anxiety disorders by identifying those individuals that are at risk for anxiety and other mental disorders.

### *Research Questions*

*Research Question 1:* Do current levels of attachment influence anxiety and the interpretation of anxiety-related situations?

*Research Question 2:* Does parental attachment affect relationships with peers and other close relationships?

*Research Question 3:* Does Anxiety Sensitivity predict onset and development of anxiety and panic disorders?

unworthiness in interpersonal relationships. *Model of Others* signifies levels of interpersonal trust and avoidance of closeness with others. Both the Model of Self and Model of Others provide continuous scores on the two dimensions of attachment-related anxiety and avoidance. Individuals with low scores on both the Model of Self and Model of Others were considered Securely attached; individuals high on both the Model of Self and the Model of Others were classified as fearful. Individuals with low scores on Model of Self and high on the Model of Others subscales were classified as dismissive and individuals with high scores on the Model of Self and low on the Model of Others are labeled as Preoccupied. The ECR-R Cronbach's alpha and test-retest reliability for its two subscales are reported at .94 and .90 for Avoidance and .91 and .91 for Anxiety. The Cronbach alpha in this study was fairly consistent with previous research in which the Anxiety was reported at .93 and .88 for the Avoidance scale. The ECR-R was used to classify individuals into attachment style categories based on its excellent correspondence to Bartholomew's adult classification scheme (Brennan, et al., 1998)

*Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1989)*. The IPPA is a 75-item inventory that assesses affective and cognitive dimensions of current attachment relationships of college students. Three scales each with 25-items, measure attachment to the mother, the father, and peers. This instrument allows for a distinct assessment of attachment to both parents individually. Three broad dimensions are incorporated in the IPPA which assess the degree of mutual trust; quality of communication; and extent of anger and alienation. The IPPA Mother and Father –Trust scale was connected to items 1, 2, 4, 13, 14, 21, 23, 24 and reverse scored for items 3 and 10. The IPPA Mother and Father-Communication scale was associated with items 6, 8, 16, 17, 20, 26, 28, and reverse scored for items 5, 7, and 15. The Alienation scale for the IPPA Mother and Father scale was associated with items 9, 11, 12,



18, 19, 22, 25, and 27. The IPPA Peer Trust scale was associated with items 6, 8, 12, 13, 14, 15, 19, 20, 21 and reverse scored for item number 5. The IPPA Peer Communication scale was associated with items 1, 2, 3, 7, 16, 17, 24, and 25. The last subscale of the IPPA Peer scale was the Alienation scale in which items 4, 9, 10, 11, 18, 22, and 23 were used. The Cronbach's alpha in previous studies ranged from .86 to .91 whereas test-retest reliability was assessed at .93. The Peer scale Cronbach alphas were .91 for Trust, .87 for Communication, and .72 for Alienation. The Mother and Father scales reported the Cronbach's alpha at .91 for Trust, .91 for Communication, and .86 for Alienation. In this project the Cronbach's alpha was .80, .79, and .86 for IPPA-Mother total, IPPA-Father total, and IPPA-Peers total respectively. IPPA-Mother/Trust, Communication, and Alienation scales in this study had Cronbach's alphas of .91, .90, and .84 correspondingly. The IPPA-Father/Trust, Communication, and Alienation scales in this study were .91, .92, and .81. Lastly, the IPPA-Peer Trust, Communication, and Alienation scales in this study were .92, .90, and .58.

*Anxiety Sensitivity Index (ASI; Peterson & Reiss, 1992).* The ASI is a 16-item self report scale that assesses the degree to which an individual believes the experience of anxiety has harmful consequences. Responses are based on a 5-point Likert scale which ranges from 0 (very little) to 4 (very much). Total scores range from 0-64. ASI scores of 25 and higher were used as a cutoff to suggest possible problems and scores over 30 to indicate possible panic disorder and severe psychopathologies. The ASI is divided into three subscales: *Physical Concerns* (items 3, 4, 6, 8, 9, 10, 11, and 14) *Psychological Concerns* (items 2, 12, 15, and 16), and *Social Concerns* (items 1, 5, 7, 13). The internal consistency of the full version ASI is good, with Cronbach's alpha ranging from .82 to .91. Test-retest reliability has been reported at  $r = .75$ . In this study, the Cronbach's alpha for total ASI was .83. The ASI, broken down into three subscale: Physical,

Psychological, and Mental concerns was reported at .76, .76, and .57 respectively. The Cronbach's alphas in this study were comparable to studies conducted by Watt, McWilliams, and Campbell (2005) in which Cronbach's alphas were reported at .85, .76, and .55.

*State Trait Anxiety Inventory (STAI; Spielberger et al., 1983).* The *State-Trait Anxiety Inventory (STAI)* is a 20-item self report scale that measures participants' degree of trait anxiety. Each item is rated on a 4-point scale (1-4) of severity with total scores ranging from 20-80. High scores indicate tendencies to experience tension, feelings of apprehension, high autonomic nervous system activity, as well as a tendency to evaluate situations as threatening. The STAI is divided into two scales; the State scale and the Trait scale. Both scales were used in this study. The cut off point of 39-40 is normally used for clinically significant symptoms of a state of anxiety (Kvaal, Ulstein, Nordhus, & Engedal, 2005). The Cronbach's alpha for the STAI-T ranges from .86 - .95 which is consistent in this study with a Cronbach's alpha of .92. There is no indication of previous studies using the STAI-State scale however it was included in this project. The Cronbach's alpha was .92 in this study.

*Panic Disorder Severity Scale (PDSS; Shear et al., 1997).* The PDSS is a series of clinical interview questions that have been reformatted into a series of seven self report questions. Questions are coded on a 5- point scale (0-4), with total scores ranging from 0-35. *Panic Disorder Severity Scale (PDSS)* may be able to predict the future onset of panic disorder. Cronbach's alpha for the *Panic Disorder Severity Scale* has been measured at .65 while interrater reliability of .87 was measured in at least one study. The Cronbach alpha in this study was .93.

*Procedure*

Participants were recruited from the undergraduate psychology research pool at Western Illinois University as well as from the general university community. Participants read and signed an informed consent after which a packet of questionnaires to draw together information on each participant's demographics including age, gender, race, family structure, and familial history of anxiety or panic disorders were distributed along with the Anxiety Sensitivity Index, State Trait Anxiety Inventory, the Experiences in Close Relationship scale (revised), the Inventory of Parent and Peer Attachment and the Panic Disorder Severity Scale. Following completion of the data packets participants responses were sorted into attachment style groups (Secure, Fearful, Preoccupied, and Dismissive) based on their responses on the Experiences in Close Relationships (revised). Participants were split into two anxiety sensitivity groups (those participants that scored at or above 25 on the ASI and those that scored below 25). This split was created based on the clinical aspects that scores on the ASI that are at or above 25 indicate possible problems and scores over 30 which indicate possible panic disorder and severe psychopathologies. The addition of the STAI-T and STAI-S measures were used to validate each participant's scores on the ASI. One way ANOVAs were used to analyze the data. Pearson's correlations were calculated to examine the association between the scales of the Inventory of Parent and Peer Attachment and its subscales (Trust, Communication, and Alienation). F-tests were conducted to increase power in the results based upon the directional hypotheses made.

## Results

This study sought to test the relationships between Anxiety Sensitivity measured by the Anxiety Sensitivity Index and two widely used attachment measures: Experiences in Close Relationships and the Inventory of Parent and Peer attachment. Hypotheses tested the

relationship between attachment styles and the Anxiety Sensitivity Index. Additional hypotheses tested the relationship between the attachment of Parents and Peers. A final hypothesis compared groups identified as high in Anxiety Sensitivity to those categorized as low on both the State-Trait Anxiety Scale and the Panic Disorder Severity Scale. Finally, while specific hypotheses regarding the role of sex were not made additional analyses were conducted to explore the effects of sex across the dependent measures.

### Demographics

Table 1 displays the means and standard deviations for all the dependent measures. Information is categorized by the derived attachment categories: Secure, Fearful, Preoccupied, and Dismissive. Table 1 provides an additional breakdown within these categories by sex as well as age.

### Hypotheses

*Hypothesis 1A:* Individuals who are insecurely attached (Preoccupied and Fearful categories) will have significantly higher levels of anxiety sensitivity than Securely attached individuals

Hypothesis 1A was tested in two ways. First, apriori planned comparisons were made between the means of Securely attached group and the average of the means for the Fearful and Preoccupied attached groups. Second, apriori planned comparisons were also made to examine the differences between Securely and Fearfully attached groups and Secure and Preoccupied groups respectively. Apriori planned comparisons were made as a method of addressing a specific hypothesis or a specific set of hypotheses. The results of the planned comparisons between Secure and combined groups (Fearful and Preoccupied) yielded a statistically significant relationship between these two groupings ( $t(69) = -5.01, p < .001$ ). Examinations of

the means showed the Securely attached group had lower Anxiety Sensitivity Index scores ( $M = 14.46$ ) compared to the average of the combined Fearful and Preoccupied group ( $M = 25.65$ ). The second set of planned comparisons yielded statistically significant differences between the Secure and Fearful attachment groups ( $t(69) = -4.12, p < .001; M(\text{Secure}) = 14.46, M(\text{Fearful}) = 24.88$ ). The planned comparison between the Secure and Preoccupied attachment groups also yielded a statistically significant difference ( $t(69) = -4.01, p < .001; M(\text{Secure}) = 14.46, M(\text{Preoccupied}) = 27.11$ ). As a result, Hypothesis 1A was retained.

*Hypothesis 1B:* Individuals with Secure or Dismissive parental attachments will have lower anxiety sensitivity than insecurely attached (Fearful and Preoccupied) individuals.

In order to test Hypothesis 1B, apriori planned comparisons were made between the mean of combined Secure and Dismissive attachment groups and the mean of the combined Fearful and Preoccupied attachment groups. The results of the planned comparisons between the combined Secure and Dismissive attachment groups and the combined Fearful and Preoccupied groups yielded a statistically significant difference ( $t(69) = -4.987, p < .001$ ). An examination of the means showed the combined Secure and Dismissive attachment group to have a lower score on the Anxiety Sensitivity Index than the combined Fearful and Preoccupied attachment groups ( $M = 15.36, (SD = 7.03); M = 25.65, (SD = 9.59)$  respectively). As a consequence of these findings Hypothesis 1B was also retained. In addition, based on the significant differences in attachment categories on the Anxiety Sensitivity Index, a Zero Order correlation was performed using the Anxiety Sensitivity Index, and three identified subscales and two identified subscales of the ECR-R. The correlations show that the three subscales of the ASI; Physical, Psychological, and Social were all significantly correlated to both ECR-R Models of Self scales. Further, because of concerns documented in the psychological literature that the Anxiety

Sensitivity Index is a reformulation of Trait anxiety an additional partial correlation was conducted. These results of this partial correlation are shown in Table 2.

*Hypothesis 2:* Individuals' attachment style toward parents will be similar to their type of attachment to peers.

This hypothesis was tested using total scores on the IPPA Mother, IPPA Father, and IPPA Peers Attachment. Additional analyses were conducted on each of the subscales of the IPPA: Trust, Communication, and Alienation for Mother, Father, and Peer Attachment. Pearson's Correlations among the three attachment relationships were significantly correlated (0.246) at 0.05 level but no significance was shown toward the IPPA Peer Trust scale. The Communication subscale of the IPPA showed a positive correlation between Mother and Father Communication scale, however, there was no significant correlation with respect to the Peers attachment scale. There were no statistically significant correlations between scores on the IPPA Mother and Father Scale with that of the IPPA Peers scale in the Trust and Communication subscales. The Alienation scale scores were the only significant correlations found between Mother, Father, and Peer scales. Therefore, Hypothesis 2 was largely rejected based on its insignificant comparisons between the IPPA Mother, IPPA Father and IPPA Peers scales.

*Hypothesis 3:* Participants categorized as high on the Anxiety Sensitivity Index will have higher levels of State Trait Anxiety as well as high Panic symptomology based on the Panic Disorder Severity Scale.

The establishment of a cutoff score of 25 or higher, on the Anxiety Sensitivity Index, was the first important information that was created in this data. This was used as an indicator of possible problems due to its strong relationship with clinically meaningful psychopathology and

is similar to criteria used elsewhere (Watts, McWilliams, & Campbell, 2005). To investigate this hypothesis, ANOVAs were conducted.

ANOVA using the STAI-Trait score as the dependent variable revealed a statistically significant difference between the high and low Anxiety Sensitivity Index categories ( $F(1, 75) = 18.78, p < .001; M(\text{high ASI}) = 47.11, (SD = 10.92); M(\text{low ASI}) = 35.21, (SD = 10.18)$ ).

ANOVA using the STAI-State score as the dependent variable revealed a statistically significant difference between the high and low ASI categories ( $F(1, 75) = 13.23, p < .001; M(\text{high ASI}) = 42.95, (SD = 11.14); M(\text{low ASI}) = 32.77, (SD = 10.37)$ ).

ANOVA using the Panic Disorder Severity Scores as the dependent variable were compared across high and low categories of the Anxiety Sensitivity Index. ANOVA revealed a statistically significant relationship between high and low Anxiety Sensitivity Index categories ( $F(1, 75) = 14.84, p < .001; M(\text{high ASI}) = 14.68, (SD = 6.79); M(\text{low ASI}) = 10.53, (SD = 2.67)$ ). As a consequence of these results Hypothesis 3 was retained.

### *Gender Effects*

Gender has been seen in previous studies to have shown sex to be seen as a significant variable in attachment research. Although this study did not propose questions hypotheses that captured the effect of sex on attachment several analyses were conducted to explore the potential effect on this variable. First, Anxiety Sensitivity Index scores indicated that males had higher means on the Anxiety Sensitivity Index in the Fearful and Preoccupied categories compared to females which is inconsistent with other research conducted by Weems, Berman, Silverman, & Rodriguez (2002). On the ECR-R Anxiety and Avoidance subscales, males in the preoccupied and fearful attachment styles had higher means than the females in the same attachment groups. IPPA Mother Scale ( $F(7, 72) = 108.68, p < .001$ ) IPPA-Father Scale ( $F(7, 72) = 163.48, p < .001$ ).

The IPPA-Peers scale ( $F(7, 72) = 91.59, p < .001$ ). On the Panic Disorder Severity scale gender showed a unique trend. Males and females were almost completely opposite in mean scores in the preoccupied, fearful, and secure attachment categories however males and females were practically the same mean for the dismissive category. There were no significant differences found between gender on the STAI-T and STAI-S scales.

### Discussion

This study is important to the growing research surrounding attachment and anxiety sensitivity. This is one of the first studies to consider a self reported measure of Panic Symptoms to potentially link Anxiety Sensitivity, Attachment, and Panic Symptoms. Data from this study provides support for Watt, McWilliams, and Campbell (2004). Results from this study supported Hypotheses 1A and 1B that fearful and preoccupied attachment would have higher means on the ASI and Secure and Dismissive would have lower means on the ASI. Hypothesis 3 which concluded that individuals high on ASI would have higher STAI-T and STAI-S scores was supported and is consistent with Watt, McWilliams, and Campbell's research (2004) findings in which Post Hoc analyses indicated individuals classified as Fearful or Preoccupied scored significantly higher than individuals classified as Secure or Dismissive on the ASI as well as the STAI-T. However hypothesis 2 which concluded that individuals' attachment style toward parents will be similar to their type of attachment to peers was not supported based on the results of this study.

Highest levels of Anxiety Sensitivity were measured in individuals categorized as Fearful and Preoccupied compared to those that were securely attached. These results provide added support to Weems, Berman, Silverman, and Rodriguez's research (2002). Austin, Jamieson, Richards, and Winkelman (2006) compared nonclinical panickers (those not diagnosed as having



Panic Disorder) with nonanxious controls to assess the influences of attachment style, Anxiety Sensitivity, and individuals' misinterpretation of catastrophic events. By comparison, results obtained from this study conflict with the Austin, Jamieson, Richards, and Winkelman (2006) findings. Individuals that were Securely attached had significantly lower Anxiety Sensitivity Index scores than individuals categorized as Fearful or Preoccupied. How can these results be explained? First Austin, Jamieson, Richards, and Winkelman (2006) used an adaptation of Hazan and Shaver's (1987) attachment typology modified for an Australian University sample of 69 participants. Sample participants were ultimately grouped by panic status and attachment style (secure or insecure). By comparison this study used four distinct attachment styles derived by mathematical formula. It is possible that Austin, Jamieson, Richards, and Winkelman (2006) methods of categorizing attachment style lacked the necessary specificity to capture and delineate specific attachment styles. As a result their comparison between Securely and Insecurely attached individuals attenuated potential difference between the categories. It is also possible that there are genuine differences due to sampling methods used and cultural differences (Australian versus American). From this study, the hypothesis that individuals categorized as insecurely attached would demonstrate greater catastrophic interpretations and higher levels of Anxiety Sensitivity was not supported.

The IPPA-Mother, IPPA-Father, and the IPPA-Peers scores did not show an association of scores with each other except for the Alienation scale. However, the lack of use of the Inventory of Parent and Peer Attachment may make the results difficult to make inferences from.

Although this study did not intend to investigate anxiety and attachment differences upon gender, it was shown to have some significant effects. In contrast to Weems, Berman, Silverman, and Rodriguez (2002), this data shows that male participants had higher values on the

Anxiety Sensitivity Index in the Fearful and Preoccupied attachment categories. Males had higher scores on the ECR-R Avoidance and Anxiety subscales in the Preoccupied and Fearful attachment styles. On the Panic Disorder Severity scale it was expected that women would have high panic symptom scores however, gender showed a unique trend. Males and females were almost completely opposite in mean scores in the Preoccupied, Fearful, and Secure attachment categories however males and females were practically the same mean for the Dismissive category. No significant differences were found between gender on the STAI-T and STAI-S scales. These results cannot be compared to other studies because most research has just focused on STAI-T rather than both STAI-T and STAI-S.

Despite the contributions this study may have in research pertaining to attachment styles and anxiety sensitivity, there are some limitations that should be mentioned. First of all the sample of participants used in this study were a sample of convenience and not randomly selected from the population. However, the other published works in the area used samples of convenience primarily self-selected university or high school students. Participants for this study were primarily Caucasian. Second, the lack of a consistent operational definition of attachment may affect not only how they responded to questions on the attachment measures. Further, the two attachment measures used here the Experiences in Close Relationships-revised and the Inventory of Parent and Peer Attachment are widely used attachment measures but do not appear based upon correlation to measure identical attachment constructs.

The use of the ECR-R in this study may not be comparable to previous studies because of their use of the ECR-R. The use of self-report measures as well as changing the PDSS Clinical Interview into a self-report form may have some implications in the validity of this study. Lastly, this study was based on a cross sectional design which may reflect cohort differences

rather than cohort and age changes. Longitudinal research is needed to examine if attachment styles are predictive of anxiety sensitivity.

## References

- Armsden, G., McCauley, E., Greenberg, M. T., Burke, P., & Mitchell, J. (1991). Parent and peer attachment in early adolescence depression. *Journal of Abnormal Child Psychology*, 18(6), 683-697
- Austin, D. W., Jamieson, R. S., Richards, J. C., & Winkelman, J. (2006). The relationship between attachment style, anxiety sensitivity and interpretive bias among adolescent nonclinical panickers. *Behaviour Change*, 23(1), 31-41.
- Bernstein, A., et al. (2007). Taxometric and factor analytic models of anxiety sensitivity: Integrating to latent structural research. *Psychological Assessment*, 19(1), 74-87.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships*. (pp. 46-76). New York, NY: Guilford Press.
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality & Social Psychology*, 78(2), 350-365.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality & Social Psychology*, 52(3), 511-524.
- Kvaal, K., Ulstein, I., Nordhus, I. H., & Engedal, K. (2005). The Spielberger State-Trait Anxiety Inventory (STAI): The state scale in detecting mental disorders in geriatric patients. *International Journal of Geriatric Psychiatry*, 20(7), 629-634.
- Muris, P., Merckelbach, H., & Meesters, C. (2001). Learning experiences and anxiety sensitivity in normal adolescents. *Journal of Psychopathology & Behavioral Assessment*, 23(4), 279-283.

- Peterson, R. A., & Reiss, S. (1002). *Anxiety Sensitivity Index Manual* (2 ed.). Worthington, OH: International Diagnostic Systems Reiss (1991).
- Scher, C. D., & Stein, M. B. (2003). Developmental antecedents of anxiety sensitivity. *Journal of Anxiety Disorders, 17*(3), 253-269.
- Stein, M. B., Jang, K. L., & Livesley, W. J. (1999). Heritability of anxiety sensitivity: A twin study. *American Journal of Psychiatry, 156*(2), 246-251.
- Taylor, S. (1995). Anxiety sensitivity: Theoretical perspectives and recent findings. *Behaviour Research & Therapy, 33*(3), 243-258.
- Watt, M. C., McWilliams, L. A., & Campbell, A. G. (2005). Relations between anxiety sensitivity and attachment style dimensions. *Journal of Psychopathology & Behavioral Assessment, 27*(3), 191-200.
- Weems, C. F., Berman, S. L., Silverman, W. K., & Rodriguez, E. T. (2002). The relation between anxiety sensitivity and attachment style in adolescence and early adulthood. *Journal of Psychopathology & Behavioral Assessment, 24*(3), 159-168.
- Weems, C. F., Berman, S. L., Silverman, W. K., & Saavedra, L. M. (2001). Cognitive errors in youth with anxiety disorders: The linkages between negative cognitive errors and anxious symptoms. *Cognitive Therapy & Research, 25*(5), 559-575.
- Zinbarg, R. E., Barlow, D. H., & Brown, T. A. (1997). Hierarchical structure and general factor saturation of the anxiety sensitivity index: Evidence and implications. *Psychological Assessment, 9*(3), 277-284.

Table 1. Means and Standard Deviations for All Study Measures By Attachment Category and Sex.

	Secure			Fearful			Preoccupied			Dismissive			Total		
	M	W	n	M	W	n	M	W	n	M	W	n	M	W	n
ASI	10.44 (4.85)	16.37 (5.95)	19	26.67 (9.5)	23.91 (6.85)	11	29.50 (12.02)	26.43 (13.90)	7	13.82 (7.85)	20.63 (8.68)	8	17.17 (10.12)	20.67 (8.86)	45
ASI-Phy	.50 (0.45)	0.89 (0.49)	19	1.46 (0.60)	1.48 (0.60)	11	1.50 (0.71)	1.61 (0.92)	7	0.60 (0.45)	1.16 (0.50)	8	0.85 (0.63)	1.22 (0.66)	45
ASI-Psy	0.22 (0.58)	0.47 (0.47)	19	1.71 (1.05)	0.80 (0.62)	11	1.75 (2.47)	1.14 (1.06)	7	0.64 (0.74)	0.78 (0.53)	8	0.85 (1.03)	.71 (0.65)	45
ASI-Soc	1.39 (0.42)	1.84 (0.50)	19	2.04 (0.62)	2.27 (0.66)	11	2.63 (0.88)	2.25 (1.04)	7	1.61 (0.90)	2.09 (0.89)	8	1.73 (0.75)	2.05 (0.71)	45
STAI-S	26.44 (5.77)	36.16 (11.47)	19	43.83 (8.50)	42.27 (13.22)	11	43.50 (16.26)	40.14 (12.47)	7	28.09 (7.54)	31.75 (8.63)	8	32.13 (10.24)	37.39 (11.73)	45
STAI-T	26.33 (5.43)	38.11 (11.17)	19	45.33 (11.55)	46.45 (10.78)	11	42.00 (16.97)	42.86 (8.97)	7	31.73 (10.27)	38.13 (10.39)	8	34.07 (11.60)	40.87 (10.77)	45
PDSS	9.89 (2.67)	11.53 (4.10)	19	10.17 (1.17)	11.55 (2.98)	11	9.50 (0.71)	14.43 (7.53)	7	12.27 (6.00)	12.38 (5.26)	8	10.80 (4.00)	12.07 (4.67)	45
ECR-R	2.0139 (0.41)	2.11 (0.47)	19	3.9101 (.39)	3.9289 (.51)	11	3.26 (.059)	3.5190 (0.31)	7	2.80 (0.43)	3.08 (0.51)	8	2.82 (0.80)	2.95 (0.89)	45
ECR-R Anxiety	1.82 (0.81)	2.12 (0.75)	19	4.1296 (.61)	3.9343 (.36)	11	4.72 (0.55)	4.4921 (0.60)	7	2.19 (0.72)	2.32 (0.56)	8	2.67 (1.26)	2.97 (1.16)	45
ECR-R Avoidance	2.21 (0.36)	2.10 (0.45)	19	3.6794 (.39)	3.9242 (.78)	11	1.81 (0.43)	2.5331 (0.31)	7	3.41 (0.38)	3.84 (0.58)	8	2.97 (0.78)	2.92 (1.00)	45
IPPA-M	88.89 (10.14)	90.37 (14.51)	19	84.67 (11.17)	96.00 (2.83)	11	96.00 (2.83)	88.71 (10.83)	7	88.27 (4.98)	94.25 (5.85)	8	88.03 (8.41)	90.70 (11.08)	45
IPPA-M/T	44.44 (5.08)	43.26 (9.34)	19	41.17 (7.89)	45.50 (3.54)	11	45.50 (3.54)	39.71 (7.78)	7	42.73 (3.44)	47.00 (2.27)	8	42.93 (5.22)	42.76 (7.59)	45
IPPA-M/C	34.00 (7.14)	33.84 (10.63)	19	31.33 (6.74)	42.00 (1.41)	11	42.00 (1.41)	32.71 (7.83)	7	33.27 (3.77)	37.75 (5.75)	8	33.33 (5.94)	34.33 (8.55)	45
IPPA-M/A	10.44	13.26	19	12.17	8.50	11	8.50	16.29	7	12.27	9.50	8	11.77	13.61	45

Table 1. Means and Standard Deviations for All Study Measures By Attachment Category and Sex.

	Secure		Fearful		Preoccupied		Dismissive		Total	
IPPA-F	86.88 (6.73)	84.22 (15.08)	86.17 (16.36)	82.50 (20.51)	82.50 (20.51)	78.14 (9.42)	83.33 (12.45)	85.25 (12.09)	84.33 (11.73)	82.33 (12.63)
IPPA-F/T	42.50 (3.74)	40.11 (11.44)	41.17 (10.28)	38.00 (7.18)	41.50 (12.02)	35.29 (7.04)	41.78 (5.89)	43.50 (6.44)	41.26 (6.76)	39.27 (9.13)
IPPA-F/C	31.25 (4.68)	29.39 (9.95)	30.00 (9.88)	25.18 (8.72)	27.00 (15.56)	25.14 (9.03)	29.78 (9.35)	31.38 (11.33)	29.63 (8.05)	27.93 (9.67)
IPPA-F/A	13.13 (3.44)	14.72 (6.23)	15.00 (4.82)	17.36 (4.43)	14.00 (7.07)	17.71 (7.39)	11.78 (2.86)	10.38 (5.15)	13.44 (3.92)	15.13 (6.15)
IPPA-P	90.11 (6.85)	98.26 (5.18)	86.17 (13.63)	93.00 (9.90)	93.00 (9.90)	96.71 (7.11)	84.00 (15.13)	95.63 (7.35)	87.20 (11.79)	96.35 (7.95)
IPPA-P/T	44.89 (4.14)	46.95 (4.14)	39.50 (6.89)	43.73 (8.09)	45.00 (1.41)	45.71 (3.59)	41.00 (7.46)	47.00 (3.16)	42.37 (6.15)	45.70 (5.49)
IPPA-P/C	31.89 (3.14)	36.32 (3.68)	28.50 (6.92)	34.55 (4.97)	30.00 (5.66)	36.00 (3.16)	28.27 (7.36)	34.25 (4.89)	29.63 (5.80)	35.15 (4.62)
IPPA-P/A	13.33 (3.16)	15.00 (3.90)	18.17 (3.66)	17.09 (2.26)	18.00 (2.83)	15.00 (3.46)	14.73 (4.43)	14.38 (2.88)	15.20 (3.98)	15.50 (3.40)
Age	21.67 (2.21)	21.28 (1.35)	21.17 (2.19)	20.14 (1.22)	21.00 (0.20)	20.78 (1.38)	21.31 (1.86)	21.17 (1.07)	21.22 (1.94)	20.93 (1.31)

Note. ECR-R=Experiences in Close Relationships; IPPA-M= Inventory of Parent and Peer Attachment Mother; IPPA-M/T= Inventory of Parent and Peer Attachment Mother/Trust; IPPA-M/C= Inventory of Parent and Peer Attachment Mother/Communication; IPPA-M/A= Inventory of Parent and Peer Attachment Mother Alienation; IPPA-F= Inventory of Parent and Peer Attachment-Father; IPPA-F/T= Inventory of Parent and Peer Attachment-Father/Trust; IPPA-F/C= Inventory of Parent and Peer Attachment-Father/Communication; IPPA-F/A= Inventory of Parent and Peer Attachment-Father/Alienation; IPPA-P= Inventory of Parent and Peer Attachment-Peer; IPPA-P/T= Inventory of Parent and Peer Attachment-Peer/Trust; IPPA-P/C= Inventory of Parent and Peer Attachment-Peer/Communication; IPPA-P/A= Inventory of Parent and Peer Attachment-Peer/Alienation; ASI = Anxiety Sensitivity Index; ASI-Phy= Anxiety Sensitivity Index-Physical Concerns; ASI-Psy= Anxiety Sensitivity Index-Psychological Concerns; ASI-Soc= Anxiety Sensitivity Index-Social Concerns; PDSS = Panic Disorder Severity Scale; STAI-T=State Trait Anxiety Inventory-Trait Scale; STAI-S=State Trait Anxiety Inventory-State Scale. ECR-R = Experience in Close Relationships; ECR-R Anxiety = Experience in Close Relationships-Anxiety Scale; ECR-R Avoidance = Experience in Close Relationships-Avoidance Scale.

\*Indicates significant difference( $p < .05$ )

Table 2.  
Zero-Order and Partial (Controlling for STAI-T) Correlations Between ASI Scores and ECR-R Attachment Dimensions.

	Mean (SD)	1	2	3	4	5	6
1. Model of Self (Anxiety)	2.85 (1.20)		.22	.35**	.37**	.19	.43**
2. Model of Others (Avoidance)	2.94 (0.92)	.29*		.07	.09	.17	.15
3. ASI – Physical	1.07 (0.67)	.59**	.19		.43**	.22	.84**
4. ASI – Psychological	.77 (0.82)	.54**	.18	.61**		.13	.72**
5. ASI – Social	1.92 (0.74)	.40**	.25*	.45**	.34**		.56**
6. ASI – Total	19.29 (9.47)	.64**	.25*	.91**	.80**	.68**	

*Note.* ASI = Anxiety Sensitivity Index; STAI-T = State Trait Anxiety Inventory-Trait Scale; Model of Self = ECR-R; Experience in Close Relationships – Revised – Anxiety Subscale. Model of Others = ECR-R; Experience in Close Relationships – Revised – Avoidance Subscale. Partial correlations controlling for STAI-T above the diagonal. \*  $p < 0.05$ . \*\*  $p < 0.01$ . STAI-Trait = ( $M = 38.39$ ,  $SD = 11.50$ )





**Table 3.**  
**Zero-Order and Partial (Controlling for STAI-T) Correlations Between ASI Scores and IPPA Attachment Scores.**

*Note.* IPPA-M = Inventory of Parent and Peer Attachment-Mother; IPPA-F = Inventory of Parent and Peer Attachment-Father; IPPA-P = Inventory of Parent and Peer Attachment-Peers; IPPA-M/T = Inventory of Parent and Peer Attachment-Mother Trust Subscale; IPPA-F/T = Inventory of Parent and Peer Attachment-Father Trust Subscale; IPPA-P/T = Inventory of Parent and Peer Attachment-Peers Trust Subscale; IPPA-M/C = Inventory of Parent and Peer Attachment-Mother Communication Subscale; IPPA-F/C = Inventory of Parent and Peer Attachment-Father Communication Subscale; IPPA-P/C = Inventory of Parent and Peer Attachment-Peers Communication Subscale; IPPA-M/A = Inventory of Parent and Peer Attachment-Mother Alienation Subscale; IPPA-F/A = Inventory of Parent and Peer Attachment-Father Alienation Subscale; IPPA-P/A = Inventory of Parent and Peer Attachment-Peers Alienation Subscale; ASI-Phy = Anxiety Sensitivity Index – Physical Concerns; ASI-Soc = Anxiety Sensitivity Index – Social Concerns; ASI-Total = Anxiety Sensitivity Index – Total; ASI-Psy = Anxiety Sensitivity Index – Physical Concerns; ASI-Social = Anxiety Sensitivity Index – Social Concerns; ASI-Total = Anxiety Sensitivity Index – Total; Partial correlations controlling for STAI-T above the diagonal. \*  $p < 0.05$ . \*\*  $p < 0.01$ . STAI-Trait Scale = ( $M = 38.39$ ,  $SD = 11.50$ ).

## Appendix A.

## Informed Consent

This sheet describes a research study that **Robert C. Intrieri, Ph.D. and Samantha Margentina, principal investigators** of the Department of Psychology at Western Illinois University are conducting research to assess the relationship between Anxiety Sensitivity and Attachment. The findings will be used to help researchers better understand the issues involving anxiety.

**If you wish to participate, please sign and date this form** and complete the attached surveys. The survey questions are designed to measure aspects of one's attachment to parents and level of Anxiety Sensitivity. The complete survey pack should take about 30-minutes to complete. Some people have been able to complete these questions in less time; some have been longer. While the aim is to respond to all the questions, you may skip any question that you do not feel comfortable answering. **All information collected will be kept confidential. Only the researcher designated above and selected research assistants will see your responses.** You should be aware that the results of this research may be presented at meetings or in publications; however your identity will not be disclosed.

**There are no foreseeable risks to you completing these questionnaires.** Likewise there is no immediate benefit for your participation, completing these questions should help researchers better understand the interaction attachment may play in Anxiety Sensitivity.

**Participation in this study is voluntary.** You are free to withdraw your participation at any time, for whatever reason. Withdrawal from this study will not jeopardize your grades or your present or future University relationship. In the event that you do withdraw from this study, the information you have already provided will be kept confidential.

**For more information concerning this research, you should contact Dr. Robert C. Intrieri, Ph.D. at (309) 298-1336.** Further questions about your rights as a research participant may be addressed by contacting Dr. Virginia Diehl, Chair, Department of Psychology, 100 Waggoner Hall, Western Illinois University, Macomb, IL 61455 (309) 298-1593. You may also contact **Beth Seaton, Sponsored Projects Administrator, Chair, WIU Institutional Review Board, 320 Sherman Hall (309) 298-1191**

I have read the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions. I give my consent to participate in this study. I have received (or will receive) a copy of this form for my records and future reference.

Study Participant: \_\_\_\_\_ Print Name

Study Participant: \_\_\_\_\_ Signature/Date

Witness \_\_\_\_\_ Print Name/Title

Witness \_\_\_\_\_ Signature/ Date

## Appendix B.

### Debriefing Statement

Thank you for taking part in today's research project. The purpose of this study is to determine the relationship between your sensitivity to anxiety and how this may relate to the relationship that you have established with your parents and other significant people in your life. Recent research suggests that as people that have had past difficulties in relationships with their parents and significant others they may be at a greater risk for the development of an anxiety disorder. In other words, people who have had difficulties in establishing and maintaining these relationships may be at greater risk to develop anxiety symptoms and panic attacks. Today you took part in a study assessing a variety of relationship issues and anxiety related symptoms. There will be other groups meeting to take part in this research project on other days. Across the next week it is important that you do not discuss this project with others in case someone you know is scheduled to take part at a later date. If you would like to stay after and ask questions I would be happy to provide any information I can. Thank you very much for your help.

Appendix C.

Demographic Data Collection Sheet

Age \_\_\_\_\_

Circle your response

Gender: 1. Female 2. Male

With what race do you identify yourself with?

- Caucasian                       Native American
- African American               Hispanic
- Asian/American                 Other

Marital Status? Circle your Response

- 1. Single (Never married)
- 2. Married
- 3. Widowed
- 4. Divorced
- 5. Separated

What is your current year in college? Circle your response

- First Year                              Fourth Year
- Second Year                            Fifth Year
- Third Year                               Six Years or Beyond

Class Standing? Circle Response

- Undergraduate Student              Graduate Student

What is your major? \_\_\_\_\_

Minor / Second Major? \_\_\_\_\_

Who do you feel more emotionally attached to? (circle one): mother    father  
other (who exactly) \_\_\_\_\_

Why do you think you are more emotionally connected to this person?

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## Appendix D.

## Experiences in Close Relationships-Revised

	Strongly Disagree					Strongly Agree	
1. I'm afraid that I will lose my partner's love.	1	2	3	4	5	6	7
2. I often worry that my partner will not want to stay with me.	1	2	3	4	5	6	7
3. I often worry that my partner doesn't really love me.	1	2	3	4	5	6	7
4. I worry that romantic partners won't care about me as much as I care about them.	1	2	3	4	5	6	7
5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.	1	2	3	4	5	6	7
6. I worry a lot about my relationships.	1	2	3	4	5	6	7
7. When my partner is out of sight, I worry that he or she might become interested in someone else.	1	2	3	4	5	6	7
8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.	1	2	3	4	5	6	7
9. I rarely worry about my partner leaving me.	1	2	3	4	5	6	7
10. My romantic partner makes me doubt myself.	1	2	3	4	5	6	7
11. I do not often worry about being abandoned.	1	2	3	4	5	6	7
12. I find that my partner(s) don't want to get as close as I would like.	1	2	3	4	5	6	7
13. Sometimes romantic partners change their feelings about me for no apparent reason.	1	2	3	4	5	6	7
14. My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7
15. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am..	1	2	3	4	5	6	7
16. It makes me mad that I don't get the affection and support I need from my partner.	1	2	3	4	5	6	7

	Strongly Disagree						Strongly Agree
	1	2	3	4	5	6	7
17. I worry that I won't measure up to other people.	1	2	3	4	5	6	7
18. My partner only seems to notice me when I'm angry.	1	2	3	4	5	6	7
19. I prefer not to show a partner how I feel deep down.	1	2	3	4	5	6	7
20. I feel comfortable sharing my private thoughts and feelings with my partner.	1	2	3	4	5	6	7
21. I find it difficult to allow myself to depend on romantic partners.	1	2	3	4	5	6	7
22. I am very comfortable being close to romantic partners.	1	2	3	4	5	6	7
23. I don't feel comfortable opening up to romantic partners.	1	2	3	4	5	6	7
24. I prefer not to be too close to romantic partners.	1	2	3	4	5	6	7
25. I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6	7
26. I find it relatively easy to get close to my partner.	1	2	3	4	5	6	7
27. It's not difficult for me to get close to my partner.	1	2	3	4	5	6	7
28. I usually discuss my problems and concerns with my partner.	1	2	3	4	5	6	7
29. It helps to turn to my romantic partner in times of need.	1	2	3	4	5	6	7
30. I tell my partner just about everything.	1	2	3	4	5	6	7
31. I talk things over with my partner.	1	2	3	4	5	6	7
32. I am nervous when partners get too close to me.	1	2	3	4	5	6	7
33. I feel comfortable depending on romantic partners.	1	2	3	4	5	6	7
34. I find it easy to depend on romantic partners.	1	2	3	4	5	6	7
35. It's easy for me to be affectionate with my partner.	1	2	3	4	5	6	7
36. My partner really understands me and my needs.	1	2	3	4	5	6	7

Appendix E.

Dr. Greensburg and Dr. Armsden Permission Letter

Mark T. Greenberg Ph.D.  
Bennett Chair of Prevention Research  
Director, Prevention Research Center

*College of Health and Human Development  
PHE 814 863-0112  
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Dear: Dr. Robert Intrieri and Samantha Margentina

Thank you for your request for information concerning the research that we have been conducting on adolescents' perceived attachment to peers and parents. This measure first appeared in the Journal of Youth and Adolescence in 1987. This article introduced the Inventory of Parent and Peer Attachment. We have enclosed a scoring manual that provides information on our factor analyses of the scales, information on reliability of the scales, and a scoring key.

We also developed an adapted the IPPA. In her dissertation, Gay Armsden revised the IPPA in order to separately assess perceived quality of attachment to mothers and fathers (instead of parents together). We have enclosed a copy of this measure, The IPPA (Mother, Father, Peer Version), and a page of scoring information. The measures have been used in a study of over 400 college students and Gay has found (with minor changes) that most of the same items fall on the same factors for mothers and father separately that we found in the factor analysis of parents together on the IPPA. We have included scoring for this version (both total score for Mother, Father, and Peer) as well as subscale scores.

There are many publications that have used each version of these measures. A sample of these articles is included in the bibliography that is part of this manual

If you have further questions, please feel free to contact me at [mxg47@psu.edu](mailto:mxg47@psu.edu) or Gay Armsden at [g.armsden@verizon.net](mailto:g.armsden@verizon.net). If you decide to use our measures in data collection, please let us know. We would also appreciate a copy of papers that utilize the measure(s).

Sincerely,

Mark T. Greenberg, Ph.D.  
Professor

Gay Armsden, Ph.D.  
Research Consultant



## Appendix F.

## Inventory of Parent and Peer Attachment

## Part I--Mother

Each of the following statements asks about your feelings about your mother, or the woman who has acted as your mother. If you have more than one person acting as your mother (e.g. a natural mother and a step mother) answer the questions for the one you feel has most influenced you now.

	Almost Never or Never True	Not very often true	Sometimes True	Often True	Almost always or always true
1. My mother respects my feelings	1	2	3	4	5
2. I feel my mother does a good job as my mother	1	2	3	4	5
3. I wish I had a different mother.	1	2	3	4	5
4. My mother accepts me as I am.	1	2	3	4	5
5. I like to get my mother's point of view on things I'm concerned about.	1	2	3	4	5
6. I feel it's no use letting my feelings Show around my mother.	1	2	3	4	5
7. My mother can tell when I'm upset about something.	1	2	3	4	5
8. Talking over my problems with my mother makes me feel ashamed or foolish.	1	2	3	4	5
9. My mother expects too much from me.	1	2	3	4	5
10. I get upset easily around my mother.	1	2	3	4	5
11. I get upset a lot more than my mother knows about.	1	2	3	4	5
12. When we discuss things, my mother cares about my point of view.	1	2	3	4	5
13. My mother trusts my judgment.	1	2	3	4	5
14. My mother has her own problems, so I don't bother her with mine.	1	2	3	4	5

	Almost Never or Never True	Not very often true	Sometimes True	Often True	Almost always or always true
15. My mother helps me to understand myself better.	1	2	3	4	5
16. I tell my mother about my problems and troubles.	1	2	3	4	5
17. I feel angry with my mother.	1	2	3	4	5
18. I don't get much attention from my mother.	1	2	3	4	5
19. My mother helps me to talk about my difficulties.	1	2	3	4	5
20. My mother understands me.	1	2	3	4	5
21. When I am angry about something, my mother tries to be understanding.	1	2	3	4	5
22. I trust my mother.	1	2	3	4	5
23. My mother doesn't understand what I'm going through these days.	1	2	3	4	5
24. I can count on my mother when I need to get something off my chest.	1	2	3	4	5
25. If my mother knows something is bothering me, asks me about it.	1	2	3	4	5

## Part II – Father

This part asks about your feelings about your father, or the man who has acted as your father. If you have more than one person acting as your father (e.g. natural and stepfathers) answer the questions for the one you feel has most influenced you.

		Almost Never or Never True	Not very often true	Sometimes True	Often True	Almost always or always true
1.	My father respects my feelings	1	2	3	4	5
2.	I feel my father does a good job as my father	1	2	3	4	5
3.	I wish I had a different father.	1	2	3	4	5
4.	My father accepts me as I am.	1	2	3	4	5
5.	I like to get my father's point of view on things I'm concerned about.	1	2	3	4	5
6.	I feel it's no use letting my feelings Show around my father.	1	2	3	4	5
7.	My father can tell when I'm upset about something.	1	2	3	4	5
8.	Talking over my problems with my father makes me feel ashamed or foolish.	1	2	3	4	5
9.	My father expects too much from me.	1	2	3	4	5
10.	I get upset easily around my father.	1	2	3	4	5
11.	I get upset a lot more than my father knows about.	1	2	3	4	5
12.	When we discuss things, my father cares about my point of view.	1	2	3	4	5
13.	My father trusts my judgment.	1	2	3	4	5
14.	My father has his own problems, so I don't bother him with mine.	1	2	3	4	5
15.	My father helps me to understand myself better.	1	2	3	4	5
16.	I tell my father about my problems and troubles.	1	2	3	4	5
17.	I feel angry with my father.	1	2	3	4	5

	Almost Never or Never True	Not very often true	Sometimes True	Often True	Almost always or always true
18. I don't get much attention from my father.	1	2	3	4	5
19. My father helps me to talk about my difficulties.	1	2	3	4	5
20. My father understands me.	1	2	3	4	5
21. When I am angry about something, my father tries to be understanding.	1	2	3	4	5
22. I trust my father.	1	2	3	4	5
23. My father doesn't understand what I'm going through these days.	1	2	3	4	5
24. I can count on my father when I need to get something off my chest.	1	2	3	4	5
25. If my father knows something is bothering me, he asks me about it.	1	2	3	4	5

## Part III

This part asks about your feelings about your relationships with your close friends. Please read each statement and circle the one number that tells how true the statement is for you now.

		Almost Never or Never True	Not very often true	Sometimes True	Often True	Almost always or always true
1.	I like to get my friends' point of view in things I'm concerned about	1	2	3	4	5
2.	My friends can tell me when I'm upset about something	1	2	3	4	5
3.	When we discuss things, my friends care about my point of view	1	2	3	4	5
4.	Talking over my problems with my friends makes me feel ashamed or foolish	1	2	3	4	5
5.	I wish I had different friends.	1	2	3	4	5
6.	My friends understand me.	1	2	3	4	5
7.	My friends help me to talk about my difficulties.	1	2	3	4	5
8.	My friends accept me as I am.	1	2	3	4	5
9.	I feel the need to be in touch with my friends more often.	1	2	3	4	5
10.	My friends don't understand what I'm going through these days.	1	2	3	4	5
11.	I feel alone or apart when I'm with my friends.	1	2	3	4	5
12.	My friends listen to what I have to say.	1	2	3	4	5
13.	I feel my friends are good friends.	1	2	3	4	5
14.	My friends are fairly easy to talk to.	1	2	3	4	5
15.	When I am angry about something, my friends try to be understanding.	1	2	3	4	5

		Almost Never or Never True	Not very often true	Sometimes True	Often True	Almost always or always true
16.	My friends help me to understand myself better	1	2	3	4	5
17.	My friends care about how I am.	1	2	3	4	5
18.	I feel angry with my friends.	1	2	3	4	5
19.	I can count on my friends when I need to get something off my chest	1	2	3	4	5
20.	I trust my friends.	1	2	3	4	5
21.	My friends respect my feelings.	1	2	3	4	5
22.	I get upset a lot more than my friends know about	1	2	3	4	5
23.	It seems as if my friends are irritated with me for no reason	1	2	3	4	5
24.	I can tell my friends about my problems and troubles	1	2	3	4	5
25.	If my friends know something is bothering me, they ask me about it	1	2	3	4	5

## Appendix G.

## Anxiety Sensitivity Index

Circle the one number that best represents the extent to which you agree with the item. If any of the items concern something that is not part of your experience (e.g. "It scares me when I feel shaky" for someone who has never trembled or had the "shakes"), answer on the basis of how you might feel if you had such an experience. Otherwise, answer all the items on the basis of your own experience.

	Very Little	A Little	Moderate	Much	Very Much
1. It is important to me not to appear nervous.	0	1	2	3	4
2. When I cannot keep my mind on a task, I worry that I might be going crazy.	0	1	2	3	4
3. It scares me when I feel "shaky" (trembling).	0	1	2	3	4
4. It scares me when I feel faint.	0	1	2	3	4
5. It is important to me to stay in control of my emotions.	0	1	2	3	4
6. It scares me when my heart beats rapidly.	0	1	2	3	4
7. It embarrasses me when my stomach growls.	0	1	2	3	4
8. It scares me when I am nauseous.	0	1	2	3	4
9. When I notice my heart is beating rapidly, I worry that I might have a heart attack.	0	1	2	3	4
10. It scares me when I become short of breath.	0	1	2	3	4
11. When my stomach is upset, I worry I might be seriously ill.	0	1	2	3	4
12. It scares me when I am unable to keep my mind on a task.	0	1	2	3	4
13. Other people notice when I feel shaky.	0	1	2	3	4
14. Unusual body sensations scare me.	0	1	2	3	4
15. When I am nervous, I worry that I might be mentally ill.	0	1	2	3	4
16. It scares me when I become short of breath.	0	1	2	3	4

Appendix H.

Dr. Spielberger's Permission to use the STAI Letter



March 12, 2007

Ms. Samantha J. Margentina  
C/O Professor Robert C. Intrieri, Ph.D.  
1 University Circle, Department of Psychology  
Western Illinois University  
Macomb, IL 61455-1390

Dear Ms. Margentina:

In response to your recent request, I am very pleased to give you permission to reproduce and use the State-Trait Anxiety Inventory in your Undergraduate Honors Thesis research, entitled:

**The Investigation of Anxiety Sensitivity and its Relationship  
with Attachment Among a College Population**

It is my understanding that your research will be carried out in the :

**Department of Psychology, Western Illinois University**

This permission is contingent on your agreement to share your findings with us when your research is completed. I look forward to receiving further information about your procedures and the results of your study as this information becomes available.

Best wishes on your research project.

Sincerely,

A handwritten signature in dark ink, appearing to read "C. D. Spielberger".

Charles D. Spielberger, Ph.D., ABPP  
Distinguished Research Professor of Psychology  
Director, Center for Research in Behavioral  
Medicine and Health Psychology  
Phone (813) 974-2342; E-mail: [spielber@cas.usf.edu](mailto:spielber@cas.usf.edu)



Appendix I.

State Trait Anxiety Inventory-State Scale

mind garden

SELF-EVALUATION QUESTIONNAIRE

STAI Form Y-1

Please provide the following information:

Name \_\_\_\_\_ Date \_\_\_\_\_ S \_\_\_\_\_

Age \_\_\_\_\_ Gender (Circle) M F T \_\_\_\_\_

DIRECTIONS:

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel *right now*, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

NOT AT ALL  
SOMEWHAT  
MODERATELY SO  
VERY MUCH SO

- |  |   |   |   |   |
|--|---|---|---|---|
| 1. I feel calm .....                                       | 1 | 2 | 3 | 4 |
| 2. I feel secure .....                                     | 1 | 2 | 3 | 4 |
| 3. I am tense .....  | 1 | 2 | 3 | 4 |
| 4. I feel strained .....                                   | 1 | 2 | 3 | 4 |
| 5. I feel at ease .....                                    | 1 | 2 | 3 | 4 |
| 6. I feel upset .....                                      | 1 | 2 | 3 | 4 |
| 7. I am presently worrying over possible misfortunes ..... | 1 | 2 | 3 | 4 |
| 8. I feel satisfied .....                                  | 1 | 2 | 3 | 4 |
| 9. I feel frightened .....                                 | 1 | 2 | 3 | 4 |
| 10. I feel comfortable .....                               | 1 | 2 | 3 | 4 |
| 11. I feel self-confident .....                            | 1 | 2 | 3 | 4 |
| 12. I feel nervous .....                                   | 1 | 2 | 3 | 4 |
| 13. I am jittery .....                                     | 1 | 2 | 3 | 4 |
| 14. I feel indecisive .....                                | 1 | 2 | 3 | 4 |
| 15. I am relaxed .....                                     | 1 | 2 | 3 | 4 |
| 16. I feel content .....                                   | 1 | 2 | 3 | 4 |
| 17. I am worried .....                                     | 1 | 2 | 3 | 4 |
| 18. I feel confused .....                                  | 1 | 2 | 3 | 4 |
| 19. I feel steady .....                                    | 1 | 2 | 3 | 4 |
| 20. I feel pleasant .....                                  | 1 | 2 | 3 | 4 |

Appendix J.

State Trait Anxiety Inventory-Trait Scale

SELF-EVALUATION QUESTIONNAIRE

STAI Form Y-2

Name \_\_\_\_\_ Date \_\_\_\_\_

DIRECTIONS

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

ALMOST NEVER  
SOMETIMES  
OFTEN  
ALMOST ALWAYS

- 21. I feel pleasant ..... 1 2 3 4
- 22. I feel nervous and restless ..... 1 2 3 4
- 23. I feel satisfied with myself ..... 1 2 3 4
- 24. I wish I could be as happy as others seem to be ..... 1 2 3 4
- 25. I feel like a failure ..... 1 2 3 4
- 26. I feel rested ..... 1 2 3 4
- 27. I am "calm, cool, and collected" ..... 1 2 3 4
- 28. I feel that difficulties are piling up so that I cannot overcome them ..... 1 2 3 4
- 29. I worry too much over something that really doesn't matter ..... 1 2 3 4
- 30. I am happy ..... 1 2 3 4
- 31. I have disturbing thoughts ..... 1 2 3 4
- 32. I lack self-confidence ..... 1 2 3 4
- 33. I feel secure ..... 1 2 3 4
- 34. I make decisions easily ..... 1 2 3 4
- 35. I feel inadequate ..... 1 2 3 4
- 36. I am content ..... 1 2 3 4
- 37. Some unimportant thought runs through my mind and bothers me ..... 1 2 3 4
- 38. I take disappointments so keenly that I can't put them out of my mind ..... 1 2 3 4
- 39. I am a steady person ..... 1 2 3 4
- 40. I get in a state of tension or turmoil as I think over my recent concerns and interests ..... 1 2 3 4

## Appendix K.

## Panic Disorder Severity Scale-Self Report Form

A panic attack is defined as a feeling of fear or apprehension that begins suddenly and builds rapidly in intensity, usually reaching a peak in less than 10 minutes. This feeling is associated with the uncomfortable physical sensations like racing or pounding heart, shortness of breath, choking, dizziness, sweating, trembling. Often there are distressing, catastrophic thoughts such as fear of losing control, having a heart attack or dying. A full panic episode has at least four such symptoms. Given these definitions:

1. In the past month, how many full panic attacks did you experience (four or more symptoms)?

0= No panic or limited symptom episodes,

1= Mild, less than an average of one full panic a week, and no more than 1 limited symptom episodes/day

2= Moderate, one or two more full panic attacks a week, and/or multiple limited symptom episodes/day

3= Severe, more than 2 full attacks/week, but not more than 1/day on average

4= Extreme, full panic attacks occur more than once a day, more days than not.

2. How many limited symptom episodes (less than four symptoms)?

0= No panic or limited symptom episodes,

1= Mild, less than an average of one full panic a week, and no more than 1 limited symptom episodes/day

2= Moderate, one or two more full panic attacks a week, and/or multiple limited symptom episodes/day

3= Severe, more than 2 full attacks/week, but not more than 1/day on average

4= Extreme, full panic attacks occur more than once a day, more days than not.

3. On average, did you have more than one limited symptom episodes/day?

0= No panic or limited symptom episodes,

1= Mild, less than an average of one full panic a week, and no more than 1 limited symptom episodes/day

2= Moderate, one or two more full panic attacks a week, and/or multiple limited symptom episodes/day

3= Severe, more than 2 full attacks/week, but not more than 1/day on average

4= Extreme, full panic attacks occur more than once a day, more days than not.

4. Over the past month, when you had panic or limited symptom attacks, how much distress did they cause you? (This question is asking you now about the distress you felt during the attack itself).

0= No panic attacks or limited symptoms episodes, or no distress during episodes

1= Mild distress but able to continue activity, with little or no interference

2= Moderate distress, but still manageable, able to continue activity, and/or maintain concentration, but does so with difficulty.

3= Severe, marked distress and interference, loses concentration and/or must stop activity, but able to remain in the room or situation.

4= Extreme, sever disabling distress, must stop activity, will leave the room or situation if possible, otherwise remains, unable to concentrate, with extreme distress.

5. Over the past month, on average, how much did you worry; feel fearful or apprehensive about when your next panic would occur or about what panic attacks might mean about your physical or mental health? (This question is asking you about times when you were not actually having a panic attack.)

0= no concern with panic

1= mild, there is occasional fear, worry, or apprehension about panic

2= moderate, often worried, fearful or apprehensive, but has periods without anxiety. There is a noticeable modification of lifestyle, but anxiety is still manageable and overall functioning is not impaired.

3= Severe, preoccupied with fear, worry or apprehension about panic, substantial interference with concentration and/or ability to function effectively.

4= Extreme, near constant and disabling anxiety, unable to carry out important tasks because of fear, worry or apprehension about panic.

6. Over the past month, were there places where you felt afraid, or that you avoided, because you thought if you had a panic attack, it could be difficult to get help or easily leave?

0= None, no fear or avoidance

1= Mild, occasional fear and/or avoidance, but will usually confront or endure the situation. There is little or no modification of lifestyle.

2= Moderate, noticeable fear and/or avoidance, but still manageable, avoids feared situations but can confront with a companion. There is some modification of lifestyle but overall functioning is not impaired

3= Severe, extensive avoidance; substantial modification of lifestyle is required to accommodate phobia, making it difficult to manage usual activities.

4= Extreme pervasive disabling fear and/or avoidance. Extensive modification in lifestyle is required such that important tasks are not performed.

7. Sometimes people with panic disorder experience physical sensations that may be reminiscent of panic and cause them to feel frightened or uncomfortable. Over the past month, did you avoid doing anything because you thought you might cause this kind of uncomfortable physical sensations?

0= No fear or avoidance of situations or activities that provoke distressing physical sensations

1= Mild, occasional fear and/or avoidance, but usually will confront or endure with little distress activities and situations which provoke physical sensations. There is little modification of lifestyle.

2= Moderate, noticeable avoidance, but still manageable, there is definite, but limited modification of lifestyle, such that overall functioning not impaired.

3= Severe, extensive avoidance causes substantial modification of lifestyle or interference in functioning.

4= Extreme pervasive and disabling avoidance. Extensive modification in lifestyle is required such that important tasks or activities are not performed.

8. Over the past month, considering all the symptoms, the panic attacks, limited symptom episodes, anticipatory anxiety and phobic symptoms, how much did your panic disorder interfere with your ability to do your job, (or your school work, or carry out responsibilities at home?)

0= No impairment from panic disorder symptoms

1= Mild, slight interference, feels job is harder to do but performance is still good

2= Moderate, symptoms cause regular, definite, interference but still manageable. Job performance has suffered but others would say work is still adequate.

3= Severe, causes substantial impairment in occupational performance, such that others have noticed, may be missing work or unable to perform at all on some days.

4= Extreme, incapacitating symptoms, unable to work (or go to school or carry out household responsibilities.)

9. Over the past month, considering all the panic disorder symptoms together, how much did they interfere with your social life?

0= No impairment

1= Mild, slight interference, feels quality of social behavior is somewhat impaired but social functioning is still adequate.

2= Moderate definite, interference with social life but still manageable. There is some decrease in frequency of social activities and/or quality of interpersonal interactions but still able to engage in most usual social activities.

3= Severe, causes substantial impairment in social performance. There is marked decrease in social activities, and/or marked difficulty interacting with others; can still force self to interact with us, but does not enjoy or function well in most social or interpersonal situations.

4= Extreme, disabling symptoms, rarely goes out or interacts with others, may have ended a relationship because of panic disorder.