International Academic Institute for Science and Technology

International Academic Journal of Social Sciences Vol. 4, No. 1, 2017, pp. 168-176.

ISSN 2454-3918

International Academic Journal of Social Sciences

www.iaiest.com

Predicting of cognitive and emotionally test anxiety base on attachment styles dimensions in girl and boy university students

Narjes Khatoon Zabihi Hesari [a], Ali Akbar Ajam[b]

[a] *Assistant Professor, Department of Psychology, Payame- Noor University, Tehran Iran.*

[b] *Assistant Professor, Department of Educational sciences, Payame- Noor University, Tehran Iran.*

Abstract

The aim of the present study was to investigate the relationship between student attachment styles and test anxiety of them.This study is a corelational study. For this purpose 200 college students (girl and boy) in payame-noor university who were studying in humane science (n=1400) in 2015-2016 academic year were chosen by cluster sampling. The students completed Hazan,& shaver attachment styles and Spielberger test anxiety questionnaire. validity and reliability of questionnaire has confirmed in previous study. The data was analyzed by using step by step regression analysis.The finding showed that all of the three attachment styles (secure, avoidant and Ambivalent) had a significant role in predicting worry and emotionally dimensions of test anxiety and secure attachment style could predict test anxiety negatively, but avoidant and Ambivalent could predict test anxiety positively. Also the result of t test showed that there was no significant difference between girls and boys student in test anxiety.

Keywords: secure attachment styles, avoidant attachment styles and Ambivalent attachment styles, test anxiety

Introduction

The "problem of anxiety" is to a significant extent, "a problem of intrusive thoughts that interfere with task focused thinking" (Sarason, 1984, p. 929). Anxiety is usually defined as "a complex state that includes cognitive, emotional, behavioral, and bodily reactions" (Sarason, 1984, p. 931).
Spielberger (1983, as cited in MacIntyre, 1995) defined the "feeling of anxiety" as an immediate, temporary emotional experience with immediate cognitive effects that is pronounced by feelings of worry, nervousness, and tension in response to a specific situation (e.g. teaching and learning contexts).
Test anxiety is a variable related to test-takers' characteristics and has blossomed because of the most frequent use of tests and their importance to students. This importance begins with the pre-education level and continues through the college level (Rubin, 1999).

Research in test anxiety has become progressively refined over the past 50 years, with greater precision in identifying subcomponent aspects of anxious responses to evaluative events since Liebert and Morris (1967) identified emotionality and worry as primary factors for test anxiety. Research over this time frame has consistently identified behavioral and attitudinal tendencies for individuals with high levels of test anxiety in these two broad domains(cassady & finch,2015). Indicators of high levels of emotionality generally include specific physiological indicators such as perspiration, headaches, elevated heart rate, tension, and cortisol production (Daly, Chamberlain, & Spalding, 2010; Mattarella-Micke, Mateo, Kozak, Foster, & Beilock, 2011; Sarason, 1984). Alternatively,
high levels of the classic worry factor – which is also referred to as cognitive test anxiety (e.g. Cassady, 2010; Lowe et al. 2008) – is associated with a broader range of behaviors and beliefs that impact the learning and testing experiences for students. Commonly identified characteristics associated with this dimension of test anxiety include (a) heightened perceived threat for tests; (b) inferior cognitive processing, organization skills, and study strategies; (c) susceptibility to cognitive interference (i.e. distractibility) during both study sessions and the
exam period; and (d) motivational perspectives that promote task avoidance, failure acceptance, and disengaged coping strategies (e.g. Cassady, 2004a, 2010; Cassady & Johnson, 2002; Davis, Distefano,2008).Research has, indeed, shown that early attachment relationships are significant predictors of fear and anxiety in later childhood.
Attachment is a biologically based system that promotes the proximity between child and caregiver and serves the Evolutionary purpose of protecting the child from danger. The infant shows specific attachment behaviors (e.g. crying) to encourage the caregiver to come close and to furnish care and protection (Bowlby, 1973,1982; Cassidy & Berlin, 1994).

Most developmental psychologists agree on the notion that there are three basic patterns of attachment. The first pattern of `secure attachment' concerns children who use their caregiver as a secure base to regulate anxiety and distress when confronted with stressful stimuli or situations. The second pattern of `avoidant attachment' refers to children who are unable to use their caregiver as a source of comfort to regulate negative affect: these children tend to avoid or ignore the caregiver. The third pattern of `ambivalent attachment' involves children who make inconsistent and ambivalent attempts to use the caregiver when in distress: although these children sometimes cling excessively to the caregiver, they also display angry, ejective behaviors (Bukatko & Daehler, 1995).

In their longitudinal study, Warren, Huston, Egeland and Sroufe (1997) investigated whether insecurely attached children develop more anxiety disorders during childhood and adolescence than securely attached children. At 12 months of age, children were classed as either securely, avoidantly, or ambivalently attached using Ainsworth, Blehar, Waters and Wall's (1978) laboratory observation

procedure. When children reached the age of 17.5 years, current and past anxiety disorders were assessed by means of a standardized interview instrument. Results showed that insecurely attached children more frequently displayed anxiety disorders than children who were securely attached. There is also abundant evidence that insecure attachment is involved in the etiology of child and adolescent depression. Studies in clinical and non-clinical samples indicate that insecurely attached children display higher levels of depressive symptoms than their securely attached counterparts (Kobak, Sudler & Gamble, 1991; Armsden, McCauley, Greenberg, Burke & Mitchell, 1990).

The results of Cristina Colonnesi, and et al (2011) indicated that insecure- ambivalent attachment showed the strongest association with anxiety. These results confirm and integrate those of Brumariu and Kerns (2010) about a stronger association between attachment insecurity and anxiety during adolescence and when using questionnaires.

Brumariu & Kerns (2010)، Manassis (2008) and Wood et al(2003) found that there is relationship between insecure child–parent attachment relationships and child anxiety.

The above researches and the relationships between variables lead us to hypothesize that there are both empirical and theoretical reasons to believe that attachment styles may be important for understanding students' test anxiety. However, the empirical research that directly examines the relation between these variables is relatively scarce, and suffers from some important limitations. So the current study was intended to examine more closely the relation between students attachment styles and test anxiety of them.

2. Method

2.1. Participants

The statistical society of the current study consist of Iranian undergraduate students (n=1400) who were studying in humane science field in Payame-Noor University (Torbat-e- Heydariyeh Branch) between 2015 and 2017 academic year. In order to select the sample group of study, 200 male and female students (According to Krejcie and Morgan's table) were chosen as the statistical sample of study through cluster sampling.

2.2. Measures

2.2.1. attachment styles

attachment styles was measured through a Hazen and Shiver's adult attachment styles questionnaire(1987) which consist of 15 items. The measures of the component parts of attachment styles were 5 items referring to secure attachment style , 5 item referring to avoidant attachment style , and 5 items that refer to ambivalent attachment style. Students

indicated their agreement with each item on a 5-point scale of Likert from strongly disagree (1) to strongly agree(5).

In the current study The structure of the instrument was examined using exploratory factor analyses. The results indicate a fairly reasonable construct validity for the measurement.

Also The reliabilities of the resulting scales were assessed with Cronbach's α, and We obtained a reliability estimate (Cronbach's α) of 0.91 , 0.81 and 0.64 orderly for secure, avoidant and ambivalent attachment style.

2.2.2.: Spielberger's Test Anxiety Inventory (STAI):

Students' Test Anxiety was assessed using Spielberger's Test Anxiety Inventory. STAI has been made by spielberger (1980). This questionnaire consist of 20 items that describe the reaction of students before, during and after the test.The measures of the component parts of **test anxiety** were 9 items referring to cognitive test anxiety and 11 item referring to emotionally test anxiety.

This assessment examined the learner's experience across the entire learning–testing cycle on a 4-point Likert scale (1D"almost never," 4D"almost always").
The structure of the instrument was examined using exploratory factor analyses and the reliabilities of the resulting scales were assessed with Cronbach's α. Cronbach reliability coefficients were about alpha=.83 for both cognitive and emotionally test anxiety. The results of exploratory factor analysis indicating a fairly reasonable construct validity for the measurement.

2.3. Procedure

The questionnaire was administered collectively during the academic year (approximately one month before final examination). Students were informed that their participation was voluntary and that their responses would be confidential.

Result

4.2. Descriptive statistics

In order to summarize the obtained data in a clear and simple way, descriptive statistics were provided. The mean, standard deviation, minimum and maximum scores for the variables are reported in Table 1.

Table1: Descriptive statistics for the variables in the study

Variable	Mean	Standard deviation	Minimum score	Maximum score
Worry	2/74	0/59	1/56	3/78
Emotionality	2/62	0/56	1/55	3/78
Secure attachment style	2/76	1/13	1	4/80
Avoidant attachment style	2/74	0/83	1/40	4/80
Ambivalent attachment style	2/83	0/62	1/60	4/20

As table 1 shows among test anxiety dimensions, worry has the highest mean (2.74)and the highest standard deviation(0.59) , and Emotionality has the lowest mean (2/62) and the lowest standard deviation(0.56). Also among the attachment style factors, Ambivalent attachment style has the highest mean(2.83) and the lowest standard deviation(0.62), and Avoidant attachment style has the lowest mean(2.74).

Table2: correlations between attachment styles and test anxiety dimensions

Variables Worry Emotionality Secure avoidant ambivalent attachment style attachment style attachment				
Worry 1				
Emotionality 0/84 1				
Secure attachment style 0/71	-0.68	1		
Avoidant attachment style 0/67	0/68	-0/65	1	
Ambivalent attachment style 0/45	0/46	-0/38	0/52	1

As table 1 shows worry and emotionally have the highest corelation and Secure attachment style and Ambivalent attachment style have the lowest relations.Among the attachment styles Secure attachment style and Ambivalent attachment style have the highest corelation with test anxiety(emotionally).

Tables 3: **Regression of test anxiety (worry) on** attachment styles

Depend variable	Predictor variables	R2	Bata	Sd	T	Δ R2	P
Test Anxiety	First Step secure attachment style	0/51	-0/71	0/02	-49/14	0/51	0/00
	Second Step secure attachment style Avoidant attachment style	0/58	-0/48 0/35	0/03 0/04	-8/09 8/85	0/08	0/00
	Third Step secure attachment style Avoidant attachment style Ambivalent attachment style	0/59	-0/47 0/30 0/11	0/03 0/04 0/05	-7/99 4/62 2/11	0/01	0/03

As table 3 shows in the first step secure attachment style , in the second step Avoidant attachment style and in the third step Ambivalent attachment style entered in equation and remained their significant in 3 step.In the first step Avoidant attachment alone predict(explained) the 0/51 variance of test anxiety(worry).In second step the Avoidant attachment entered the equation and coefficient of determination for this stage is 0/58 and so this variable increased the prediction proportion about 7 percent. In the third step the Ambivalent attachment entered the equation and coefficient of determination for this stage is 0/59 and so this variable increased the prediction amount (proportion) about 1 percent
.

Table 4: Regression of test anxiety (emotionally) on attachment style

Depend variable	Predictor variables	R2	Bata	Sd	T	Δ R2	P
Test Anxiety	First Stop Avoidant attachment style	0/47	0/68	0/03	13/23	0/47	0/00
	Second Stop Avoidant attachment style secure attachment style	0/56	0/41 -0/41	0/04 0/03	6/75 -6/73	0/09	0/00
	Third Stop Avoidant attachment style secure attachment style Ambivalent attachment style	0/57	0/36 -0/40 0/11	0/04 0/03 0/04	5/46 -6/61 12/2	0/01	0/03

As table 4 shows in the first step avoidant attachment style, in the second step secure attachment style and in the third step Ambivalent attachment style entered in equation and remained their significant in 3

step.In the first step avoidant attachment style alone predict(explained) the 0/47 variance of test anxiety (**emotionally**).In second step the secure attachment style entered the equation and coefficient of determination for this stage is 0/56 and so this variable increased the prediction proportion about 9 percent. In the third step the Ambivalent attachment style entered the equation and coefficient of determination for this stage is 0/57 and so this variable increased the prediction amount (proportion) about 1 percent.

Table 5: Table5: The results of t test for comparison the average score (test anxiety dimension) of the male and female students.

Variables	Aex	Meam	Sd	sE	T	Df	P
Worry	Female	2/77	0/57	0/04	1/11	89	0/26
	Male	2/66	0/63	0/08			
Emotionality	Female	2/63	0/54	0/04	0/70	88	0/48
	Male	2/57	0/61	0/08			

As we see in table 5 the result of t test shows that there is no significant difference between test anxiety scores of male and female students.

Discussion

This study provides a novel perspective on research attempting to identify the relations between attachment styles and test anxiety. (With emotionality and worry as primary factors for test anxiety).

1- As the results of regression analysis show, all the three attachment styles can predict test anxiety and secure attachment style can predict test anxiety negatively but Avoidant and Ambivalent attachment style predict test anxiety positively. The results further suggest that there is no significant difference in test anxiety scores between girls and boys university students.

To the best of the author's knowledge no similar research on attachment styles and its relationship with two factor of test anxiety (emotionality and worry) has yet been observed. Our result is not in line with the result of previous research but In general, this finding is consistent with prior research examining the relationship between attachment style and anxiety

Bowlby (1973) and Stayton and Ainsworth (1973) hypothesized a link between attachment insecurity and child anxiety. A few decades later, Sroufe (1996) described separation distress as one of the earliest forms of an anxious experience. Child's repetitively experience of distress in the child–parent relationship can become a precursor of later anxiety disorders. Therefore, an Increasing number of studies has examined the relation between attachment and anxiety during childhood and adolescence.

For instance Warren, Huston, Egeland and Sroufe (1997) investigated whether insecurely attached children develop more anxiety disorders during childhood and adolescence than securely attached children. At 12 months of age, children were classed as either securely, avoidantly, or ambivalently attached using Ainsworth, Blehar, Waters and Wall's (1978) laboratory observation procedure.

When children reached the age of 17.5 years, current and past anxiety disorders were assessed by means of a standardized interview instrument. Results showed that insecurely attached children more frequently displayed anxiety disorders than children who were securely attached. There is also abundant evidence that insecure attachment is involved in the etiology of child and adolescent depression. Studies in clinical and non-clinical samples indicate that insecurely attached children display higher levels of depressive symptoms than their securely attached counterparts (Kobak, Sudler & Gamble, 1991; Armsden, McCauley, Greenberg, Burke & Mitchell, 1990).

The results of Cristina Colonnesi, and et al (2011) indicated that insecure- ambivalent attachment showed the strongest association with anxiety. These results confirm and integrate those of Brumariu and Kerns

(2010) about a stronger association between attachment insecurity and anxiety during adolescence and when using questionnaires.
Brumariu & Kerns (2010)، Manassis (2008) and Wood et al(2003) found that there is relationship between insecure child–parent attachment relationships and child anxiety.
There is a general agreement in the literature that insecure-ambivalent attachment has a stronger relation with the development of anxiety than avoidant attachment or attachment insecurity in general (Bar-Haim, Dan, Eshel, & Sagi-Schwartz, 2007; Bo¨ gels & Brechman- Touissant, 2006; Bowlby, 1973; Cassidy & Berlin, 1994; Finnegan, Hodges, & Perry, 1996; Hodges, Finnegan, & Perry, 1999; Weinfield, Sroufe, Egeland, & Carlson, 1999).

Thus it can be proposed that the results of our study are somehow in line with previous study.This study and other studies would support the proposition that there is negative relation between secure attachment style and test anxiety and positive relations between avoidant and Ambivalent attachment style and test anxiety.
On the other hand as we said, The results of academic engagement t test with regard to sex show that there is no significant difference between test anxiety scores of girls and boys.
Along this Mohamadi, Alishahi and Soleimani (2014) and sadipoor and shojaee(2014) found that the anxiety level does not differ significantly between males and females. This means that males and females generally experience the same level of anxiety in exam settings.
The results of this study suggest that greater attention to dimensions of test anxiety for those students with high levels of test anxiety may provide greater precision in identifying specific challenges and potential solutions.

Reference:

Ainsworth, M. D. S. Blehar, M. Waters, E. & Wall, S. (1978). Patterns of attachment. Hillsdale, NJ: Erlbaum.

Armsden, G. C. McCauley, E. Greenberg, M. T. Burke, P. M. & Mitchell, J. R. (1990). Parent and peer attachment in early adolescent depression. Journal of Abnormal Child Psychology, 18, 683±697.

Bar-Haim, Y. Dan, O. Eshel, Y. & Sagi-Schwartz, A. (2007). Predicting children's anxiety from early attachment relationships. Journal of Anxiety Disorders, 21, 1061–1068.

Bowlby J (1973). Separation: Anxiety & Anger. Attachment and Loss (vol. 2); (International psycho-analytical library no.95). London: Hogarth Press. ISBN 0-7126-6621-4. OCLC 8353942

Bowlby, J. (1982). Attachment and loss: Retrospect and prospect. American Journal of Orthopsychiatry, 52, 664–678

Brumariu, L. E. & Kerns, K. A. (2010). Parent–child attachment and internalizing symptoms in childhood and adolescence: A review of empirical directions. Development and Psychopathology, 22, 177–203.

Bukatko, D. & Daehler, M. W. (1995). Child development (2nd ed.). Boston: Houghton Mi.in Company.

Cassady, j.c Finch,W.H.(2015). Using factor mixture modeling to identify dimensions of cognitive test anxiety. Journal of Learning and Individual Differences,41.14-20.

Cassady, J.C. (2004). The influence of cognitive test anxiety across the learning-testing cycle. Learning and Instruction, 14(6), 569–592.

Cassady, J.C. (2010). Anxiety in Schools: The Causes, Consequences and Solutions for AcademicAnxieties. New York: Peter Lang.Cognitive test anxiety and academic procrastination.Contemporary Educational Psychology, 27, 270–295.

Cassady, J.C. & Johnson, R. E. (2002). Cognitive test anxiety and academic procrastination.

Cassidy, J. & Berlin, L. J. (1994). The insecure=ambivalent pattern of attachment: Theory and research. Child Development, 65, 971–991.

Colonnesi, C. Van Steensel, B. & Bogels, S. M. (2011). Infants' early attachment to mothers and fathers' predicts later social anxiety. Manuscript in preparation.

Contemporary Educational Psychology, 27, 270–295.

Daly, A. Chamberlain, S. & Spalding, V. (2010). The fear factor: Cognitive and physiologicalcomponents of test anxiety in A-level mock exams. Paper presented at the AnnualMeeting of the Stress and Anxiety Research Conference, Galway, Ireland

Davis, H.A. DiStefano, C. & Schutz, P.A. (2008). Identifying patterns of appraising tests in

first-year college students: Implications for anxiety and emotion regulation during test taking. Journal of Educational Psychology, 100(4), 942–960. http://dx.doi.org/10. 1037/a0013096.

Hazan, C. & Shaver, P. (1987). Romantic love conceptualized as an attachment process. Journal of Personality and Social Psychology, 52,511-524.

Kobak, R. R. Sudler, N. & Gamble, W. (1991). Attachment and depressive symptoms during adolescence: a devel- opmental pathway analysis. Development and Psychopathology, 3, 461

Liebert, R.M. & Morris, L.W. (1967). Cognitive and emotional components of test anxiety: A distinction and some initial data. Psychological Reports, 20, 975–978.

Lowe, P.A. Lee, S.W. Witteborg, K.M. Prichard, K.W. Luhr, M.E. Cullinan, C.M. et al.

Macintyre,P.D.(1995). How Does Anxiety Affect Second Language Learning? A Reply to Sparks and Ganschow Authors, The modern language journal, Volume 79, Issue 1 ,Pages 90–99.

Manassis, K. (2008). Keys to parenting your anxious child. New York: Barron's Educational Series.

Mattarella-Micke, A. Mateo, J. Kozak, M.N. Foster, K. & Beilock, S.L. (2011). Choke or thrive? The relation between salivary cortisol and math performance depends on individual differences in working memory and math-anxiety. Emotion, 11(4),1000–1005. http://dx.doi.org/10.1037/a0023224

Regina A. Finnegan, Ernest V. E. Hodges, David G. Perry.(1996).Preoccupied and Avoidant Coping during Middle Childhood.journal of child development ,Volume 67, Issue 4,Pages 1318–1328.

Rubin, S. I. (1999). The role of culture and other predictors in test anxiety. Humanities and Social Sciences, 60, 1452

Sarason, I. G. (1984). Stress, anxiety, and cognitive interference: Reactions to tests. Journal of Personality and Social Psychology, 46(4), 929- 938.

Spielberger, C.D. & Vagg, P.R. (1995). Test anxiety: A transactional process model. In C.D. Spielberger, & P.R. Vagg (Eds.), Test anxiety: Theory, assessment, and treatment (pp. 3–14). Washington, D.C.: Taylor & Francis.

Sroufe, L. A. (1996). Emotional development: The organization of emotional life in the early years. New York: Cambridge University Press.

Stayton, D. J. & Ainsworth, M. D. S. (1973). Individual differences in infant responses to brief, everyday separations as related to other infant and maternal behavior. Developmental Psychology, 2, 226–235.

Warren, S. L. Huston, L. Egeland, B. & Sroufe, L. A. (1997). Child and adolescent anxiety disorders and early attachment. American Academy of Child and Adolescent Psychiatry, 36, 637–644.

Weinfield, N. S. Sroufe, L. A. Egeland, B. & Carlson, E. (1999). The nature of individual differences in infant-caregiver attachment. In J. Cassidy & P. Shaver (Eds.), Handbook of Attachment: Theory, research, and clinical application (pp. 68-88). New York: Guilford Press.

Wood, J. McLeod, B. D. Sigman, M. Hwang, W. C. & Chu, B. C. (2003). Parenting and childhood anxiety: Theory, empirical findings and future directions. Journal of Child Psychology and Psychiatry, 44, 134–151.