

A Study on Relationship between Depression and Anxiety in Relation to Academic Achievement among Higher Education Students

Ranjan Das

M.A (Psychology), Research Scholar, India

Abstract

This study aims to indicate the impact of anxiety and depression among a sample of higher education students for their academic achievement in the University of Burdwan Rajbati, Bardhaman. In addition, this study also focused on determining the difference between gender and the level of depression and anxiety they have. It also investigates the difference between colleges and the levels of depression and anxiety. So two tools of measurements have been applied, one measures the level of anxiety and the other measures the level of depression on a random sample of 200 students from different faculties and department in the university. The results of the study revealed that females are more anxious than males, while males are more depressed than females. Additionally, the results indicate that there is a positive relationship between achievement and anxiety, while a negative relationship is found between academic achievement and depression.

KEYWORDS: Depression, anxiety, academic achievement, higher education student, gender.

INTRODUCTION

The most common psychological problems in adolescent age are depression and anxiety (Kashani and Orvaschel, 1988). While depression is less found during childhood, which increases during the onset of adolescent age (Beest and Baerveldt, 1999). During adolescent age, depression is felt mostly for short duration and which depends on the certain conditions. Adolescents who are suffering from depression are generally sad and have broken heart. They often feel loneliness, but can continue doing their daily duties and job. However, the general symptoms of depression includes, showing the symptoms of low self-esteem, self-blame, loneliness, hopelessness, suicide thoughts, anger, and peevishness (Elgard and Arlett, 2002). From various research, it was revealed that depression and anxiety may be experienced at the same time. It has been declared that depression and anxiety are found simultaneously with 12 to 75% of the surveys conducted (Kashani and Orvaschel, 1988).

Taking admission to a university or other institutions for higher studies is a joyous time for any student, but it can be a stressful life event for some students (Wong et al., 2006). Life of university or College is new to any student and during first-year students are particularly at-risk as they face a number of new stressors during the transitional period of starting a new life in university or college (Voelker, 2003). Higher education students in their preparation for professional careers need to cope not only with psychological and psychosocial changes that are connected to the development of an autonomous personal life but also with the academic and social demands that they

encounter. Therefore, the period of higher education is a sensitive period in an individual's life span, and this period can be regarded as important for developing systems and intermediation methods that may prevent or decrease mental problems (Gjerde, 1993).

Evidence that supports that university students are susceptible to mental health problems has generated increased public concern in many societies (Stanley and Manthorpe, 2001). Previous studies suggest high rates of psychological abnormalities, especially depression and anxiety, among higher education students all over the world (Adewuya et al., 2006; Nerdrum et al., 2006; Ovuga et al., 2006; Voelker, 2003). Edwards and Holden (2001) revealed that among problems for which college students seeking counseling services were anxiety and depression, academic and work-related concerns were ranked second as the presenting problem. Brackney and Karabenick (1995) discussed that high levels of distress, accompanying with limited coping resources, equip students less able to meet academic demands. Unfortunately, college counselors are flexible very thin, there by providing treatment for anxiety and depression-related problems. Romano and Hage (2000) introduced the importance of integrative theoretical models that would better allow for the prevention of psychological difficulties. Comprehensive models describing the psychological resources that protect college students from anxiety and depression are lacking however there is an increasing interest in positive psychology and the factors that constitute wellness fit well with this type of prevention agenda, increasing interest in positive psychology and the factors that constitute wellness fit well with this type of prevention agenda (Dahlin et al., 2005). Psychological distress may result in withdrawal from study as first-year students who has just taken an admission were found to be twice as likely to drop out as their counterparts in the second and third years (Curtis and Curtis, 1999). Adlaf et al. (2001) revealed a prominent inverse relationship between year of studies and mental health among higher education students, those who are at greatest risk being first-year students. Psychological morbidity in undergraduate students represents a neglected public health issues and holds major implications for campus health services (Poch et al., 2004; Stewart-Brown et al., 2000). In terms of life quality, understanding the impact of this neglected public health phenomenon on one's educational attainment and prospective occupational success is very important.

Related to the increasing number of students, who are dismissed from the university and colleges because of the low, cumulative grades, as well as some of them who change their academic fields specialty, leads to the emergence of the present study, and is going to answer the following questions:

1. Is there any relationship between depression, anxiety and academic achievement among higher education students ?
2. Is there any significant difference between male and female higher education students and levels of depression and anxiety ?
3. Is there any significant difference between colleges and levels of depression and anxiety of higher education students ?

METHODS

Sample

A sample of 200 undergraduate students were randomly selected by cluster sampling method (105 females and 95 males) attending at the University of BurdwanRajbati, Bardhaman,. Participants were aged between 18 and 25 years. And all Participants are from different colleges throughout the original study which rates 10% at TTU (Table 1).

Table 1. Participants of the study sample by sex and college.

Gender	Total	Science stream	Humanity stream
Male	95	53	42
Female	105	50	55
total	200	103	97

Table 2. The relationship between depression, anxiety and academic achievement
Average Average depression

**Correlation is significant at the level of 0.01 (2-tailed).

Table 3. The means and standard deviations of the sample scores on a scale of anxiety and depression.

	Gender	N	Mean	S D
Average anxiety	Male	95	1.5787	0.50743
	Female	105	3.0557	0.62459
	Total	200	2.3766	0.93742
Average depression	Male	95	4.4405	1.01384
	Female	105	1.4067	0.65492
	Total	200	2.7900	1.73541

Instruments

Beck depression inventory (BDI)

The BDI is the depression inventory most commonly used in both research and clinical practice. Total test – items were 35. BDI measures various cognitive, physiological, and

effect-related symptoms of depression such as sadness, feelings about the future, irritability; loss of pleasure, fatigue, and changes in appetite.. According to the correlation between them, the coefficient alpha for the Beck Depression Inventory was 92. Cronbach's alpha for the current study sample was 0.94 (Beck et al., 1988).

Spielberger trait anxiety inventory (TAI)

The TAI was used to assess anxiety in this study. It is a tool which measures trait anxiety by 20 test items, defined as the relatively stable tendency of an individual to respond anxiously to a stressful situation. Higher scores indicate a greater degree of trait anxiety. Cronbach's alpha for the current study sample was 0.92 (Spielberger et al., 1984).

Table 4. ANOVA of the sample scores on a scale of anxiety and depression.

		Sum of squares	DF	Mean square	F	Sig.
Average anxiety	Between groups	109.532	1	109.532		
	Within groups	65.276	198	0.43	332.22	0
	Total	174.787	199		5	
Average depression	Between groups	460.415	1	460.415		
	Within groups	138.756	198	0.704	656.95	0
	Total	599.19	199		7	

Table 5. The means and standard deviations of the sample scores on a scale of anxiety and depression and college.

	Stream	N	Mean	S D
Average anxiety	Humanity	97	2.4041	0.96670
	Science	103	2.3545	0.91292
	Total	200	2.3776	0.93732
Average depression	Humanity	97	3.0319	1.59089
	Science	103	2.5641	1.84012
	Total	200	2.7910	1.73541

Table 6. ANOVA of the sample scores on a scale of anxiety and depression and college.

		Sum of squares	DF	Mean square	F	Sig.
Average anxiety	Between groups	129.364	39	3.327		
	Within groups	45.453	160	.285	11.688	0.000
	Total	174.787	199			
Average depression	Between groups	569.874	39	14.622		
	Withingroups	29.326	160	0.184	79.759	0.000
	Total	599.190	199			

RESULTS

Pearson correlation coefficient was used to determine the relationship between depression, anxiety and academic achievement. There exist a negative relationship between depression and academic achievement, and a positive relationship between anxiety and academic achievement as is evident in Table 2 the value of Pearson coefficient - 0.498(**), 0.476(**) 0.01 level (2-tailed).

Table 3 indicates that there are differences between males and females on the measurements of anxiety and depression, it was found that the average anxiety among females is higher than among males (3.0557), while the average depression in males higher than females (4.4405).

In addition, ANOVA was used to find out those who are more depressed and anxious between male and female higher education student. Table 4 reveals the existence of difference between male and female higher education student in terms of anxiety and depression, where the percentage of anxiety among female higher education student is higher than male higher education student, while the depression is higher among male higher education student than female higher education student. Table 5 shows that the average of students in science and humanity streams are high on the scales of anxiety and depression, but depression of college students is the highest in humanity stream (3.0319) compared with the science stream. ANOVA was used to determine the differences between streams; it was found that depression in humanity stream students was higher than science stream colleges students (Table 6).

DISCUSSION

Results of this study reveal that there is a negative relationship between depression and academic achievement of students at the higher education level, and this also suggest that the higher the depression among students, the lower their level of achievement. Simonds and Whiffen (2003) support this result. Also, the study indicates that there is a positive relationship between anxiety and academic achievement of students, and this suggests that whenever there is a medium level of concern among students, the higher their academic achievement will be. This study also found differences between gender, depression and anxiety. The female higher education students have more anxiety in comparison with the male higher education students, while male higher education students are more depressed than female higher education students. Wong et al. (2006) inferred the same results of the study. They, also, found a significant difference between the mean of depression scores of male and female higher education students. Male students means of depression scores were significantly higher compared to female students. Some previous studies, that revealed mental distress among university or college students using other survey methods and rating scales, found higher levels of depression among female students.

Another study using the Higher Education Stress Inventory and Major Depression Inventory revealed that male students gave higher ratings than females for depression and stress (Dahlin et al., 2005). Studies conducted on samples of Turkish students using the General Health Questionnaire-12 and Beck Depression Inventory instruments found higher depression rates among male students (O' zdemir and Rezaki, 2007). Edwards and Holden (2001) suggested the same results that male students gave higher ratings

than females for depression, but the female students gave higher ratings than males for anxiety. However, there are also studies that found no differences with respect to gender in terms of depression or depressive mood (Grant et al., 2002). Generally, the transition to adulthood represents a period with high risk for the onset of depression and the state of confusion (Reinherz et al., 1999).

In addition, this study suggest that the students who were studying, sciences and arts and administrative and financial, had higher depression and anxiety level than those who were studying sciences and engineering, and these results were not due to mediator factors such as age, study year and residency, as explained in the results. Some of the literature found higher scores of depression and anxiety among medical students (Dyrbye et al., 2006). In addition, Ozdemir and Rezaki (2007) concluded that the students who were studying social and political sciences had higher depression, anxiety and stress scores than those who were studying basic sciences and engineering or medicine. Another study found no difference regarding depression among medical, graduate and law students (Helmert et al., 1997).

Conclusion

While the transition to adulthood represents a high-risk period and the state of for the onset of depression generally (Eldekl, 2006), young people who enter tertiary education may face new social and intellectual challenges that may increase their risk of suffering depression, anxiety and stress (Swift and Wright, 2000). The high rates of depression, anxiety and stress among students have major implications. Not only will psychological morbidity have adverse effects on the student's educational attainment and quality of life, but family life and institutional life may be disrupted (Poyrazli et al., 2002). Prolonged untreated depression, anxiety or stress may impact upon the functioning and productivity of the people who are affected, thus presenting a public health problem (Hawkins, 1995).

The high rates of depression and anxiety among university students have major implications, not only with psychological morbidity that will have unfavorable effects on students' health, development, educational attainment and quality of life, but also the deteriorating influence on their own families, institutions and even on other people's lives. How long should the mental health of students, especially having minor signs of depression, anxiety and stress, remain as a neglected public health problem in institutes and centres of higher education. College counselors could play a vital preventative role by considering anxiety symptoms as a potential warning signal for depression.

In addition, if students have already begun to experience symptoms of depression, the counselor may explore whether the anxiety is of extended periods which might have precipitated the depression.

The gender differences reported in previous research could be a result of students' cultural background and the process of socialization both genders go through. Therefore, it is important to study international students from different qualities to see if gender is related to their previous experiences of anxiety and depression.

REFERENCES

- Adewuya A, Ola B, Olutayo O, Mapayi B, Oginni O (2006). Depression amongst Nigerian university students. Prevalence and socio-demographic correlates. *Psychiatr. Epidemiol.*, 41: 674–678.
- Adlaf E, Gliksman L, Demers A, Newton B (2001). The prevalence of elevated psychological distress among Canadian undergraduates: Findings from the 1998 Canadian Campus Survey. *J. Am. Coll. Health*, 50: 67–72.
- Aktekin M, Karaman T, Senol Y, Erdem S, Erengin H, Akaydin M (2001). Anxiety, depression and stressful life events among medical students: A prospective study in Antalya, Turkey. *Med. Educ.*, 35: 12–17.
- Beck AT, Steer RA, Garbin MG (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clin. Psychol. Rev.*, pp. 77–100.
- Beest M, Baerveldt C (1999). The relationship between adolescents' social support from parents and from peers. *Adolescence*, 34: 193–199.
- Brackney BE, Karabenick SA (1995). Psychopathology and academic performance: The role of motivation and learning strategies. *J. Couns. Psychol.*, 42:456-465.
- Curtis JR, Curtis TE (1999). A study of dropouts at the University of North Carolina. *J. Am. Coll. Health*, 14: 140–146.
- Dahlin M, Joneborg N, Runeson B (2005). Stress and depression among medical students: A cross-sectional study. *Med. Educ.*, 39: 594–604.
- Dyrbye NL, Thomas MR, Shanafelt TD (2006). Systematic review of depression, anxiety and other indicators of psychological distress among US and Canadian Medical students. *Acad. Med.*, 81(4): 354–373.
- Edwards MJ, Holden RR (2001). Coping, meaning in life, and suicidal manifestations: Examining gender differences. *J. Clin. Psychol.*, 59: 1133-1150.
- Eldelekl J (2006). The Relationship between the Perceived Social Support and the Level of Depression and Anxiety in University Students, *Dept. Couns. Psychol.*, 6(3): 742-752.
- Elgard JF, Arlett C (2002). Perceived social inadequacy and depressed mood in adolescents. *J. Adolesc.*, 25: 301-305.
- Gjerde PF (1993). Depressive symptoms in young adults: A developmental perspective on gender differences. In: Funder DC, Parke DR, Tomlinson-Keasey CA, Widaman K (eds). *Studying lives through time*. American Psychological Association, Washington DC., pp. 255–288.
- Grant K, Marsh P, Syniar G (2002). Gender differences in rates of depression among undergraduates: Measurement matters. *J. Adolesc.*, 25: 613–617.
- Hawkins MJ (1995). Anxiety in relation to social support in a college population. *J. Coll. Student Psychother.*, 9: 79–88.
- Helmert KF, Danoff D, Steinert Y, Leyton M, Young SN (1997). Stress and depressed mood in medical students, law students and graduate students at McGill University. *Acad. Med.*, 72(8): 708–714.
- Kashani JH, Orvaschel H (1988). Anxiety disorders in mid adolescence: A community sample. *Am. J. Psychiatr.*, 144: 931-934.
- Nerdrum P, Rustøen T, Rønnestad MH (2006). Student psychological distress: A psychometric study of 1750 Norwegian, 1st-year undergraduate students. *Scand. J.*

- Educ. Res., 50(1): 95–109.
- O' zdemir H, Rezaki M (2007).General health questionnaire-12 for the detection of depression.Turk.Psychiatr.Derg. 18(1): 1–8.
- Ovuga E, Boardman J, Wasserman D (2006). Undergraduate student mental health at Makerere University, Uganda. *World Psychiatr.*, 5(1): 51–52.
- Poch FV, Villar E, Caparros B, Juan J, Cornella M, Perez I (2004).Feelings of hopelessness in a Spanish university population.Descriptive analysis and its relationship to adapting to university, depressive symptomatology and suicidal ideation.*Psychiatr.Epidemiol.*, 39: 326–334.
- Poyrazli S, Arbona C, Nora A, McPherson R, PiseccoS (2002). Relation between assertiveness, academic self efficacy, and psychological adjustment among international graduate students. *J. Coll. Student Dev.*, 43:632–642.
- Reinherz HZ, Giaconia RM, Hauf AM, Wasserman MS, Silverman AB (1999). Major depression in the transition to adulthood: risks and impairments. *J. Abnormal Psychol.*, 108: 500–510.
- Romano JL, Hage SM (2000). Prevention and counseling psychology: Revitalizing commitments for the 21st century. *Couns. Psychol.*, 28: 733-763.
- Simonds VM, Whiffen EU (2003). Are gender differences in depression explained by gender differences in co-morbid anxiety? *J. Affect. Disorders*, 77: 197-202.
- Spielberger C D (1984). Assessment of state and trait anxiety Conceptual and methodological issues. *Southern Psychol.*, 2: 6-16.
- Stanley N, Manthorpe J (2001). Responding to students' mental health needs: impermeable systems and diverse users. *J. Mental Health*, 10(1): 41–52.
- Stewart-Brown S, Evans J, Patterson J, Petersen S, Doll H, Balding J, Regis D (2000). The health of students in institutes of higher education: An important and neglected public health problem? *J. Public Health Med.*, 22(4): 492–499.
- Swift A, Wright MO (2000). Does social support buffer stress for college women: When and how? *J. Coll. Student Psychother.*, 14: 23–42.
- Voelker R (2003). Mounting student depression taxing campus mental health services. *JAMA*, 289: 2055–2056.
- Wong JG, Cheung EP, Chan KK, Ma KK, Tang SW (2006). Web-based survey of depression, anxiety and stress in first-year tertiary education students in Hong Kong. *J. Psychiatr.*, 40(9):777–782.