

The Effect of Anxiety and Depression on Academic Performance of the Students

Laxmi Rani¹, Cyma Anjum²

¹Associate Professor of Psychology, MSKB College, BRA BU. Muzaffarpur

²Asst. Professor of Education, LNMCBM (Edu.Prog.), BRA. BU. Muzaffarpur.

Abstract:

The purpose of this study is to explore how social support is related to the overall well-being of college students. Literature suggests social support buffers a negative effect of distress on academic performance. A multiple linear regression was conducted to examine the association between anxiety, depression, social support, and academic performance. Some findings were not congruent with the literature. Although social support had a significant moderating effect, it did not necessarily buffer the negative influence of depression on academic performance. Surprisingly, among the group who reported having low social support, depression had a positive relationship with academic performance. After eliminating an insignificant moderating effect of social support on the relationship between anxiety and academic performance, the total effect of anxiety on academic performance was not significant. The implication of the findings is not to disregard mental health issues; rather, it is possible that these students are more difficult to reach due to less visible symptoms and/or succeeding academically.

Keywords: Anxiety, Depression, Distress, Social support, Academic Performance,

Introduction:

Mental health issues affect many people across the country. These types of challenges are not new and have been around for a long time. However, awareness of these issues has increased in recent years. Approximately twenty percent of individuals in the United States may have a mental illness that has been, or could be diagnosed (Khubchandani, Brey, Kotecki, Kleinfelder & Anderson, 2016). Depression and anxiety are the most common types of mental disorders, and co-morbidity is also very common with these two disorders. Many individuals with anxiety also have depression and vice versa. Anxiety and depression have been found to be more prevalent among college students than the general population (American College Health Association, 2013; Beiter, Nash, McCrady, Rhoades, Linscomb, Clarahan, & Sammut 2015; Holliday, Anderson, Williams, Bird, Matloc, Ali, & Suris, 2016). Many colleges and universities have implemented counselling and/or programs on campus that are specifically designed to help to combat and address the mental health issues of their students.

It is difficult to measure whether the students with anxiety and/or depression accessed the support offered and whether that helped them to better manage their symptoms. A literature review was done to examine the impact of anxiety and depression on academic performance, as well as the role that social support has in relation to these variables. Research involving social support as it relates to academic achievement in college students is limited. Particularly, there is a gap in literature exploring this

relationship with students that have anxiety and/or depression. Few studies have been done to examine the effect of social support for students with anxiety and depression on academic performance.

Methodology:

The purpose of this study was to examine the impact that depression and anxiety on academic performance among college students, as well as analyze how that relationship is affected based on the level of social support. This study was designed to decipher whether students with anxiety and depression symptoms may prevent lower academic performance through social support.

Research Design and Sample:

Data was collected using a cross-sectional online survey. The requirements to participate include being 18 years of age or older and having been enrolled at the Intermediate Classes. The surveys were administered online with their consent in return.

The following instruments were used to measure independent and dependent variables in this study: academic performance, depression, anxiety, and social support.

Academic Performance:

Academic performance was measured using grade point average (GPA). First, the students were asked to select the range their GPA fell within. The students were also asked to report their current GPA. Both value and category questions were asked to account for students that may not know their exact GPA. This was to increase the chances of a higher response rate.

Depression and Anxiety:

The Depression and Anxiety Stress Scale 21 (DASS-21) was used to measure depression and anxiety among the participants. The DASS-21 is a 21-item self-report scale that measures three dimensions: depression, anxiety, and stress. The scale consists of three 7-item self-report scales taken from the full version of the DASS, and each subset is used to measure the three constructs. Therefore, for this study, only 14 items from the DASS-21 were used to measure depression and anxiety; the 7 items used to measure stress were not included.

Social Support:

The Multidimensional Scale of Perceived Social Support (MSPSS) was utilized to measure participants' social support. The MSPSS measures three components of perceived support: family, friends, and significant others (Zimet, Dahlem, Zimet, & Farley, 1988). Each subscale has 4 items; therefore, the total scale is 12-items. A 7-point Likert scale is used and ranges from 1 (very strongly disagree) to 7 (very strongly agree).

Students were also asked some basic demographic questions as well including gender, age, race, and classification (i.e. Fresher Intermediate, Graduate Students).

Statistical Analysis:

A hierarchical linear regression analysis was conducted to examine the effects of independent variables (depression, anxiety, and social support) on the dependent variable (academic performance measured by GPA score), when a moderating effect was found statistically significant.

A series of preliminary analyses were performed to check the internal consistency of three composite variables (depression, anxiety, and social support). Cronbach's alpha is a widely-used tool for assessing the reliability of a scale. This value refers to "the extent that correlations among items in a domain vary, there is some error connected with the average correlation found in any particular sampling of items"

(Nunnally, 1978, p. 206). Nunnally (1978) argued the alpha level of equal or higher than .60 considered to be indicative of minimally adequate internal consistency.

Anxiety:

The subscale of anxiety exhibited high internal consistency ($\alpha = .877$). Therefore, the scores on the 7 items were summed to generate a composite value to measure anxiety.

Depression:

The subscale of depression exhibited high internal consistency ($\alpha = .938$). Therefore, the scores on the 7 items were summed to generate a composite value to measure depression.

Social Support:

The subscale of social support exhibited high internal consistency ($\alpha = .923$). Therefore, the scores on the 12 items were averaged to generate a composite value to measure social support. **Descriptive**

Students were asked to provide their GPA for the fall of 2016. Which show that the mean for GPA was 3.11 with a standard deviation of 0.68

Anxiety was measured using 7 items from the DASS-21. The sum of these items was used to measure level of anxiety: normal (0 through 7), mild (8 through 9), moderate (10 through 14), severe (15 through 19), and extremely severe (20+). The mean of the anxiety sum was 7.55 with a standard deviation of 0.58. Furthermore, on the anxiety sum scale, 15 (16.1%) students fell within the normal range, 19 students (20.4%) were in the mild range, 11 (11.8%) were in the moderate range, and only one student (1.1%) was in the severe range.

Depression was measured using 7 items from the DASS-21. The sum of these items was used to measure level of depression: normal (0 through 9), mild (10-13), moderate (14-20), severe (21-27), and extremely severe (28+). The mean of the depression was 9.66 with a standard deviation of 6.55. Furthermore, on the depression sum scale, 48 (51.6%) students fell within the normal range, 14 (15.1%) were in the mild range, 27 (29%) were in the moderate range, and 4 (4.3%) were in the severe range.

Social support was measured using MSPSS, a 12-item instrument. The average of these responses was used to measure level of social support: low (1 through 2.9), moderate (3 through 5) and high (5.1 through 7). Of the respondents, 9 (9.7%) rated as low level of support, 30 (32.3%) were considered to have a moderate level of support, and 54 (58.1%) had a high level of support.

The proposed model includes demographic information (gender and age), risk factors (anxiety and depression), protective factors (social support) and the interaction terms ('depression X social support' and 'anxiety X social support'). This proposed model did not significantly statistically explain the variance of academic performance (GPA). The results indicate that the overall regression model was not statistically significant ($R^2 = 0.135$, $F = 1.889$, $p = .081$) explaining the variance in depression by 13.5%.

A new variable Low Past AP (low past academic performance) was included. Although past academic performance is a predictor of current academic performance (Larson, Orr, & Warne, 2016), this survey did not collect high school GPA. Low Past AP was indirectly measured by aggregating a group member that had the lowest cumulative GPA based on the student population data.

A multiple linear regression analysis was conducted using this revised model. The examination of residual plots is considered a preferable method of detection for the assumptions.

The results indicate that the overall regression model was statistically significant ($R^2 = 0.172$, $F = 2.520$, $p = .021$) explaining the variance in depression by 17.2%.

The moderating effect of social support between anxiety and academic performance was not significant. Even after controlling for these predictors, gender and past academic performance were still statistically significant factors. Of these variables, gender was the strongest predictor. Female students were shown to have a higher academic performance than male students. Also, students who belong to a group with low past academic performance have low current GPA scores.

Implications:

As mentioned in limitations, because this was a cross-sectional study, this may have had an impact on the findings. Further studies should be done to look at the relationships of these variables based on longitudinal data. Data could be collected during and after services in order to evaluate any changes, specifically in the outcome variable, GPA. Findings from longitudinal research could more adequately show the relationship between the variables, specifically depression, social support, and GPA. Another recommendation for research would be to do a similar study that measures or sorts out the types of anxiety. Different types of anxiety may manifest in different ways, which makes it difficult to assess the relationship between anxiety and the other variables.

Therefore, an implication would be to continue this system and ensure that college faculty and staffs are aware of it and understand the purpose. Furthermore, implementing similar programs in other higher education institutions would help to reach these students.

Conclusions:

This research study sought to better understand the association among anxiety, depression and academic performance, as well as examined the possibility of social support as a moderator in relation to these variables. The researchers gathered data through a survey method, collecting information on the students' anxiety and depression symptoms, GPA, and perceived social support. Analyzing this data, it was found that the sample mean on both anxiety and depression was between the normal and mild range. For social support, the findings showed that 9 (9.7%) students had low support, 30 (32.2%) moderate support, and 54 (58.1%) high support. The variables found to have statistical significance on academic performance were gender and low past academic scores. A linear regression was used to determine the association between the dependent, independent, and moderating variables. A significant interaction was found between depression, social support and GPA. These results should be considered with caution and further research should be done to better understand the relationships between these variables. Furthermore, those working with college students should consider the overall well-being of the student, as it is possible that their academic performance may not be affected by anxiety and/or depression.

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