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Anxiety, Depression, and Stress in Relation to Academic Achievement among Higher Secondary School Students

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ABSTRACT

Psychological disorders like anxiety, depression and stress significantl0y exacerbate the pressure on students to perform better. The factors collectively hamper their performance leading to low academic achievement. In Chhattisgarh state few studies have looked especially in the field of mental health and academic achievement of the students in last decades. This study aimed to fill that gap and find out the relationship among anxiety, stress, depression and academic achievements. For this purpose 120 (60 boys & 60 girls) students of 11th standard studying in government schools located in rural area of Mahasamund district of Chhattisgarh state were taken randomly. The ADSS (anxiety, depression and stress scale) was used to measure the anxiety, depression and stress among students. To analysis data Correlational research design will be used. Hierarchical multiple regression analysis revealed significant negative association between depression and, anxiety for criterion variable academic achievement. Furthermore, stress and academic achievement found to be significant positive association with each other. It is concluded that mental health condition of the students affect academic achievements.

Keywords: *Hierarchical Regression, Students, Depression, Anxiety, Stress, Academic Achievement.*

School students have been found to have high prevalence of mental health problems across the country. In Chhattisgarh state had limited resources for mental health treatment, counseling or alternative interventions to help students and manage their level of depression, stress and academic anxiety (Pandey, 2016). There have been few mental health studies found in regional context; so to bridge the gap and find out the relationship among anxiety, depression, and stress with academic achievement.

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Many factors influenced students' academic performance. Literature have documented a number of inputs that have impact on students academic achievement these include classroom environment (Sharma, Mitra & Jha, 2014), teacher support (Sharma, 2014). Certain characteristics of the students and their family are also important, including parents education (Sharma & Jha, 2016), locale and sex (Sharma, 2016). Present study focusing on another aspect that influence academic achievement i.e. anxiety, stress and depression. Literature predicts negative association of depression, and anxiety on academic achievement.

Academic anxiety is a common psychosocial disorder in school going students (Costello, Mustillo, Erkanli, Keeler & Angold, 2003). But most of the cases academic anxiety could be underestimated (Tomb & Hunter, 2004); it's linked with perceived social support (Pandey, 2016; Weeks, Coplan & Kingsbury, 2009; Albano, Chorpita & Barlow, 2003). Over anxiety associated with lower academic achievement (Donovan & Spence, 2000; McLoone , 2006; Rapee et al., 2005). Parents' high educational expectations are one of the most negative factor for poor academic achievement and committed self harm activities (Pandey, 2016). The teachers, counselors, administrators, and peers are all school setting can be a first line of defense for students in dealing with mental health concerns and to bring awareness to anxiety, stress and educate helpful ways to cope stress and anxiety (Thompson et al., 2013; Thompson, & Trice-Black, 2012; Tillfors et al., 2011; Tomba et al., 2010; Keough & Schmidt, 2012; Leikanger et al., 2012).

Depression is a mental state in which one suffers sadness; it's a common but major cause of mental illness like depression and academic stress. Depression interrupts an individual's thoughts processes, emotional response and daily life activities (Williams, 1984; Farby, 1980). There are many causes that contribute to depression such as destructive thoughts, cognition, loneliness, social isolation, and lack of peer support. If parents ignore that all things become students getting serious mental condition.

Academic stress is anything that inflicted an additional demand on an individual's capability to cope, often with academic stress. Mostly every student feel stress in his or her schooling period (Sahu, Pandey & Jha, 2016). Some common factors arises stress such as long school schedule, poor socioeconomic status, family educational background (Pandey, 2016); impracticable belief and demands of guardians and teachers, poor academic performance, and poor study (Liu & Lu, 2012; Banerjee, 2011; Gray-Stanley et al., 2010; Rao, 2008; Hamad, Fernald, Karlan & Zinman, 2008).

On the basis of above findings of the studies, present study has been undertaken to find the relationship among anxiety, depression and stress on academic achievement.

METHOD

Participants

The sample of the study comprised of 120 (50% boys & 50% girls); mean age 16 years, higher secondary (11th class) school going students studying in government schools at Mahasamund district of Chhattisgarh. All students belonging to Hindi medium and school was situated in rural areas. Random sampling method was used to data collection.

Design

In this study correlational research design was used. Hierarchical multiple regression analysis was used to analyzed the data. Enter method selecting the predicting variables for the regression model was considered suitable.

Measures

This study consists of three predicting variables viz. depression, anxiety and stress (Primary data), and one criterion variable i.e. academic achievement (Secondary data). Socio-demographic variables were noted by self made measures.

1. **Academic Achievement –** to assess academic achievement of the participants marks obtained by their 10th class board annual examination was taken as a secondary data.
2. **ADS Scale (Bhatnagar et al., 2010) –** to assess the anxiety, depression and stress, ADS scale is used. The reliability and validity were high at 0.72 which is significant at .01 level of significance.

RESULT AND DISCUSSION

Mean and Standard Deviation were carried out for knowing the nature of the data to yield meaningful information about criterion, and predictors (Table - 1).

Table 1 Demographic information of the participants (N = 120)

Variables	Frequency	Percentage (%)	Mean	SD
Participants				
Boys	60	50%		
Girls	60	50%		
Academic Achievement			57.12	12.12
Anxiety			05.92	03.29
Depression			04.19	02.79
Stress			06.48	02.87

Hierarchical multiple linear regression analysis was used to summarize the data as well as to study relationship between a single criterion variable and three predicting variables. The results are presented in (table – 2).

Table 2 Hierarchical multiple regression analysis of predicting variables with criterion variable academic achievement

Predictors	Model 1		Model 2		Model 3		Model 4	
	β	VIF	B	VIF	β	VIF	B	VIF
Gender	0.146	1.000	0.175*	1.02	0.144	1.056	0.155*	1.060
Anxiety			-0.187*	1.025	-0.328**	1.709	-0.352**	1.728
Depression					-0.227*	1.761	0.120	2.148
Stress							0.212*	1.500
R	0.146		0.235		0.291		0.338	
R^2	0.021		0.055		0.085		0.114	
R^2 Change	0.021		0.034		0.029		0.030	
F Change	F(1,158) = 3.401		ΔF(1,157) = 4.562*		ΔF(1,156) = 4.770**		ΔF(1,155) = 4.971**	

Note - **p < .01, *p< .05

The result of model 1 control variable gender found insignificant F (1, 158) = 3.401, p< 0.067; standardized β value = 0.146, t = 1.844 indicate that the variable is not contributing significant relation in the variation of the criterion variable academic achievement. That means boys and girls had equal performance in reference to academic achievement.

In model 2 including predicting variable anxiety ΔF value (1, 157) = 4.562, p < 0.05 is significant which explain that the model 2 anxiety is significant negative contribution in variation of the academic achievement, contributing 3.4 % individual, R = 0.235; R^2 = 0.055, ΔR^2 = 0.034, the model explain overall 5.5% of the variance in academic achievement, which anxiety was added. The standardized β value = 0.187, t = -2.371, indicates that anxiety is also significantly negatively associated with academic achievement.

It is concluded that control variable gender was found significant relation that's why enter method include this variable; gender (β value = 0.175, t = 2.216) contribute 2.1% and anxiety was 3.4% separately; overall both variables are explained 5.5 % of the total variance (Table – 2). It means when level of anxiety would be down the achievement level will be high. Result also indicated that boys were taken less stress comparatively to girls. VIF was found between the ranges of 1.025 to 1.025 which was distant from the 1.0 to 4.0 criteria that may indicate multicollinearity concern (Pandey & Shrivastava, 2016).

It is clear that all the variables were positively correlated with academic achievement of the participants. Studies find awareness and management of academic anxiety can be vital in reducing comorbidity with mental health issues (Miller, Laye-Gindhu, Bennett, Liu, Gold, March, Olson, & Waechtler, 2011). Students would be capable to task more efficiently and focus more on schooling, attendance, and social anxiety for learners themselves, educators, and supervisors (Bostick & Anderson, 2009; Lothmann et al., 2011; Marks et al., 2010; Muris et al.,

2002; Thompson et al., 2013; Thompson, & Trice-Black, 2012; Von Der Embse et al., 2013). Parents could help make emotional and tangible support to help for their child basic requirements (Pandey, 2016).

Furthermore, in model 3 when including predicting variable depression ΔF value (1, 156) = 4.770, $p < 0.01$ is found significant which explain that the model 3 depression is significantly negative contribution in variation to academic achievement, contributing 2.9% individual, R = 0.291; $R^2 = 0.085$, $\Delta R^2 = 0.029$, the model explain overall 8.5% of the variance in academic achievement, which depression was added. The standardized β value = -0.227, t = -2.226, $p< 0.05$ indicates that depression is also significantly negatively associated with academic achievement. It is concluded that control variable gender was found insignificant relation and anxiety was found significant negative relation; anxiety (β value = -0.328, t = -3.268, $p<0.01$) contribute 5.5% and depression was 2.9% separately; overall both variables are explained 8.5 % of the total variance (Table – 2).

There are few supporting studies was also reveale that depression are directly affect students achievement (Williams, 1984; Farby, 1980). It means when level of depression would be down the achievement level were high. VIF was found between the ranges of 1.056 to 1.761 which was distant from the 1.0 to 4.0 criteria that may indicate multicollinearity concern (Pandey & Shrivastava, 2016). It is clear that all the variables were negatively correlated with academic achievement of the participants.

In addition, in model 4 including predicting variable stress ΔF value (1, 155) = 4.971, $p < 0.01$ is significant which explain that the model 4 stress variable is significant positive contribution in variation of the academic achievement, contributing 3.0% individual, R = 0.338; $R^2 = 0.085$, $\Delta R^2 = 0.114$, the model explain overall 11.4% of the variance in academic achievement, which stress was added. The standardized β value = 0.212, t = 2.278, indicates that stress is found significantly positively associated with academic achievement. It is concluded that control variable gender was found insignificant relation ((β value = 0.155, t = 1.198, $p< 0.05$) and anxiety was found significant negative relation; anxiety (β value = -0.352, t = -3.533, $p< 0.01$) and depression ((β value = 0.120, t = 0.076, p> NS); overall variables are explained 11.4 % of the total variance (Table – 2). Academic stress influenced academic achievements of the secondary class students (Sahu, Pandey & Jha, 2016). It means general level of stress was fruitful for students; when stress was present academic achievement level was high (Liu & Lu, 2012; Banerjee, 2011; Gray-Stanley et al., 2010; Rao, 2008; Hamad, Fernald, Karlan & Zinman, 2008). A researcher was found similar correlation with depression, anxiety, stress and academic achievement (Bhasin, Sharma & Saini, 2010). VIF was found between the ranges of 1.060 to 2.148 which was distant from the 1.0 to 4.0 criteria that may indicate multicollinearity concern

(Pandey & Shrivastava, 2016). It is clear that all the variables were correlated with academic achievement of the participants.

CONCLUSION

The findings of the present study concluded that, academic stress, depression (Mental illness), and anxiety was directly associated with students daily life and influence their level of academic achievement; it is most important to parents, teachers, mental health professionals and counselors to solve problems of the students related to their mental health.

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REFERENCES

Albano, A. M., Chorpita, B. F. & Barlow, D. H. (2003). Childhood anxiety disorders. In E.J. Mash & R. A. Barkley (Eds.), Child psychopathology (pp. 279–329). New York: *Guilford Press.*

Bhasin, S. K., Sharma, R., & Saini, N. K. (2010). Depression, Anxiety and Stress among Adolescent Students Belonging to Affluent Families: A School-based Study. *Indian Journal of Pediatrics,* 77, 161-165. DOI-10.1007/s12098-009-0260-5

Bhatnagar, P., Singh,M., Pandey, M., Sandhya, & Amitabh (2011). Anxiety, Depression, Stress Scale. *National Psychological Corporation Agra*: INDIA.

Bostick, D., & Anderson, R. (2009). Evaluating a small-group counseling program-A model for program planning and improvement in the elementary setting. *Professional School Counseling,* 12(6), 428-433.

Costello, E.J., Mustillo, S., Erkanli, A., Keeler, G., Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archive General Psychiatry*. 60, 837 – 843.

Donovan, C. L., & Spence, S. H. (2000). Prevention of childhood anxiety disorders. *Clinical Psychology Review,* 20, 509–531.

Farby, J. J. (1980). Depression. In R. H. Woody (Ed.), Encyclopaedia of clinical assessment. San Francisco, CA: *Jossey-Bas.*

Gray-Stanley, J. A., Muramatsu, N., Heller, T., Hughes, S., Johnson, T. P., & Ramirez- Valles, J. (2010). Work stress and depression among direct support professionals: The role of work support and locus of control. *Journal of Intellectual Disability Research*, 54(8), 749-761.

Hamad, R., Fernald, L. C. H., Karlan, D. S., & Zinman, J. (2008). Social and economic correlates of depressive symptoms and perceived stress in South African adults. *Journal of Epidemiology and Community Health*, 62(6), 538-544. http://arizona.openrepository.com/arizona/bitstream/10150/194424/1/azuetd2943sip1m.pdf

Keough, M. E., & Schmidt, N. B. (2012). Refinement of a brief anxiety sensitivity reduction intervention. *Journal of Counseling and Clinical Psychology*, 80 (5), 766-772. doi:10.1037/a0027961

Leikanger, E., Ingul, J.M., & Larsson, B. (2012). Sex and age-related anxiety in a community sample of Norwegian adolescents. *Scandinavian Journal of Psychology*, 53, 150-157. doi: 10.1111/j.1467-9450.2011.00915.x

Liu, Y., & Lu, Z. (2012). Chinese high school students' academic stress and depressive symptoms: Gender and school climate as moderators. *Stress and Health*, 28(4), 340-346.

Lothmann, C., Homles, E. A., Chan, S.W.Y, & Lau, J.Y.F. (2011). Cognitive bias modification training in adolescents: effects on interpretation biases and mood. *Journal of Child Psychology and Psychiatry*, 52(1), 24-32. doi: 10.1111/j.1469-7610.2010.02286.x

Marks, A.D.G., Sobanski, D.J., & Hine, D.W. (2010). Do dispositional rumination and/or mindfulness moderate the relationship between life hassles and psychological dysfunction in adolescents?. *Australian & New Zealand Journal of Psychiatry*, 44(9), 831-838.

McLoone, J., Hudson, J. L., & Rapee, R. (2006). Treating anxiety disorders in a school setting. *Education and Treatment of Children*, 29, 219–242.

Miller, L.D., Laye-Gindhu, A., Bennett, J. L., Liu, Y., Gold, S., March, J. S., & ... Waechtler, V. E. (2011). An effectiveness study of a culturally enriched school-based CBT anxiety prevention program. *Journal of Clinical Child and Adolescent Psychology*, 40(4), 618-629. doi:10.1080/15374416.2011.581619

Muris, P., Meesters, C., & Gobel, M. (2002). Cognitive coping vs Emotional disclosure in the treatment of anxious children: A pilot-study. Cognitive Behaviour Therapy,31(2), 59-67.

Pandey, D. (2016). Psychological Causes of Residential and Day Scholar School Dropout. *The International Journal of Indian Psychology*, 3(3), 183- 189.

Pandey, D. (2016). Psychoneuroimmunology of Chronic Illness. Redshine International Press, India.

Pandey, D., & Shrivastava, P. (2016). Psychometric Properties and Confirmatory Factor Analysis of the Social Support Scale. *International Journal of Indian Psychology*. 3 (4), 191-198, DIP:18.01.152/20160304.

Rao, A. S. (2008). Academic stress and adolescent distress: The experiences of 12th standard students in Chennai, India. A Ph.D. dissertation, Graduate College University of Arizona. Retrieved May 30, 2013, from

Rapee, R. H., Kennedy, S., Ingram, M., Edwards, S., & Sweeney, L. (2005). Prevention and early intervention of anxiety disorders in inhibited preschool children. *Journal of Consulting and Clinical Psychology*, 73, 488–497.

Sahu, L., Pandey, D., & Jha, M. (2016). Self-concept and academic stress among boys and girls students. *Indian Journal of Health & Wellbeing*, 7(5), 540-542.

Sharma, G. (2016). Locale and sex as determinants of academic achievement (2016). International journal of information research and review, 3 (8), 2691-2694.

Sharma, G. (2016). Teacher support as determinant of academic achievement. *IJRDO – Journal of educational research*, 1(4), 1-9.

Sharma, G.(2014). Study of classroom environment, parental education, income & institution as predictor of students academic achievement. *International journal of education and management studies*, 4 (4),258-262.

Sharma, G., & Jha, M. (2014). Academic performance in relation to parents education, institution and sex. *Journal of psychosocial research*, 9 (1), 173-186.

Sharma, G., Mitra, M., & Jha, M. (2015). Classroom environment as predictor of academic achievement. The Asian Men: An International Journal, 9 (1), 47-51.

Thompson, E. E., & Trice-Black, S. (2012). School-based group interventions for children exposed to domestic violence. *Journal of Family Violence*, 27(3), 233- 241. doi:10.1007/s10896-012-9416-6

Thompson, E.H., Robertson, P., Curtis, R., & Frick, M.H. (2013). Students with anxiety: implications for professional school counselors. *Professional School Counseling*, 16 (4), 222-234.

Tillfors, M., Andersson, G., Ekselius, L., Furmark, T., Lewenhaupt, S., Karlsson, A., & Carlbring, P. (2011). A randomized trial of internet-delivered treatment for social anxiety disorder in high school students. *Cognitive Behavior Therapy*, 40(2), 147-157.doi: 10.1080/16506073.2011.555486

Tomb, M., & Hunter, L. (2004). Prevention of anxiety in children and adolescents in a school setting: The role of school-based practitioners. *Children & School*, 26, 87-101.

Tomba, E., Belaise, C., Ottolini, F., Ruini, C., Bravi, A., Albieri, E., & ... Fava, G. A. (2010). Differential effects of well-being promoting and anxiety-management strategies in a non-clinical school setting. *Journal of Anxiety Disorders*, 24(3), 326-333.doi:10.1016/j.janxdis.2010.01.005

Von Der Embse, N., Barterian, J., & Segool, N. (2013). Test anxiety interventions for children and adolescents: A systematic review of treatment studies from 2000- 2010. *Psychology in the Schools*, 50(1). doi: 10.1002/pits.21660

Weeks, M., Coplan, R. J., & Kingsbury, A. (2009). The correlates and consequences of early appearing social anxiety in young children. *Journal of Anxiety Disorders*, In press, accepted manuscript.

Williams, C. A. (1984). Factor analysis of Maslach Burnout Inventory data. Unpublished raw data.

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