

Comparative Study

Relationship between Academic Stress and Achievement Motivation: Influence of Gender and Course

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ABSTRACT

Higher education studies have become stressful due to the extremely high work load, future consciousness in students and due to expectations of significant others. This affects achievement motivation of the students. In this backdrop, present study was designed to find out the relationship between academic stress and achievement motivation along with the influence of course studied and gender. A total of 120 students were randomly selected from the city of Mysore. They were administered academic stress scale by Lin and Chen, (2009) and achievement motivation scale by Muthee and Thomas (2009). The data was collected by both Google forms and direct interaction. The data was analyzed by descriptive and inferential statistics. Inferential statistics included Pearson's product moment correlation and two-way ANOVA. Results revealed that as the academic stress increased achievement motivation also increased linearly and significantly. Students pursuing commerce course had highest achievement motivation scores, followed by students pursuing arts and science courses. Course pursued did not have significant influence over academic stress. Female students' experienced significantly higher academic stress as well had higher achievement motivation than male students.

Keywords: *Academic Stress, Achievement Motivation, College Students*

Academic stress is one of the biggest concerns of students today due to the growingly competitive world we live in today. Especially in Asian countries such as China and India, where the resources and job opportunities are limited and the demand is high. We have individuals with engineering degrees becoming tea stall vendors and PhD holders remaining unemployed for years. One of the sources of Academic stress is the pressure to achieve a certain percentage/grade. This pressure may be self-inflicted or inflicted on the child by his/her parents. Sometimes in Indian households, the parents promise a present of their choice if the child gets a certain percentage. An example of external motivation to achieve, a boy may be promised a bike that he has been eyeing for a while if he does well in 12th grade and gets a decent rank in a competitive exam that decides which university one is eligible for. Internal motivation to achieve may come from wanting to go to a good university, in order to get good quality education and access to resources. Achievement motivation typically refers to the level of one's motivation to engage in achievement behaviors, based on the interaction of such parameters as need for achievement, expectancy of success, and the incentive value of success. Our construct of

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Received: September 14, 2022; Revision Received: December 27, 2022; Accepted: December 31, 2022

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motivational orientation refers to the type of motivational stance which the child adopts toward classroom learning. Thus, one may engage in schoolwork for intrinsic reasons, because work is challenging, enjoyable, and piques one's curiosity, or alternatively, one may engage in schoolwork for extrinsic reasons, either to obtain external approval or because the educational system requires it. (Harter & Connell, 1984, p. 222)

Banu, Vardhan and Rao conducted a study in 2015 that examined the perceived academic stress of university students across, gender, academic streams, semesters, and academic performance. The results revealed that female students experienced higher academic stress in comparison to males. It also showed that students from Humanities and Social science experienced more academic stress in comparison to students from Science and Management. Struthers, Perry, and Menec (2000) conducted a study in 2000 to examine the relationship among academic stress, coping, motivation and performance in college. The results showed that higher academic stress led to lower grades. Students who focused on problem-focused coping did better than students who focused on emotions-focused coping. Students engaged in problem-focused not only performed better but were more likely to be motivated.

In this article, an attempt is made to assess the effect academic stress on achievement motivation. There are peers who have to work harder when the course is strenuous because they believe that the achievement of doing well in tough subjects will only increase the satisfaction or appreciation of the achievement. Hence their motivation to do well is higher as well. While these concepts on their own, have research and theories, both of these concepts together hasn't been explored much. Additional interest of the researcher is that to find out the influence of course pursued and gender on Academic stress and achievement motivation. It is hypothesized that there will be significant relationship between Academic stress and achievement motivation well as course pursued and gender of the students will have significant influence over Academic stress and achievement motivation.

METHOD

Sample

The sample consists of 120 college students. They were selected through simple random sampling. While most of the data were collected through Google forms, some of the data collected by distributing questionnaires in St Philomena's college, Mysuru. Permission was taken from the college prior to data collection.

Tools employed

Demographic data sheet: The information regarding gender, course pursuing, age, etc., was collected through demographic data sheet.

Academic stress inventory (Lin & Chen, 2009): The academic stress inventory of this research was divided into seven factors, with a total of 34 questions. Likert's five-point scale was used, ranging from 5 completely agree, to 1 completely disagree. The higher the points for each factor, the higher is the degree of stress produced by this factor. The possible causes of stress that can be faced in the academic stress inventory developed for this research were: 1. Stress from teachers 2. Stress from results 3. Stress from tests 4. Studying in group stress. 5. Peer stress 6. Time management stress. 7. Self-inflicted stress. The Cronbach reliability test was carried out and the α value obtained by the authors of the questionnaire was between 0.85-0.92. An α value of the overall academic stress questionnaires was 0.90

Achievement motivation Inventory (Muthee & Thomas, 2009): The scale has 32 items in total where 18 items are positively worded and 14 are negatively worded. Items with positive and negative wording are arranged randomly in the final scale. The serial numbers of the items with positive wording are the following.3, 4, 5, 6, 11, 13, 14, 16, 17, 20, 23, 24, 26, 28, 29, 30, 31, 32.The serial number of items with negative wordings are : 1, 2, 7, 8, 9,10, 12, 15, 18, 19, 21, 22,25 and 27.The responses to the items are scored using a five-point Likert format. The points are completely agreed, mostly agree, agree to some extent, mostly disagree and completely disagree. The scoring weights given to these responses are 5,4,3,2 and 1 respectively, for positively worded items and 1,2,3,4 and 5 respectively for negatively worded items. This scoring scheme ensures that higher scores indicate higher levels of achievement motivation and lower scores indicate lower levels of achievement motivation. The reliability of the scale has been computed using Cronbach’s alpha, which was found to be 0.749.

Procedure

A paragraph containing the purpose of the study, my contact information and a google link to the questionnaires were forwarded to various student Whatsapp groups in Mysore. College students that consented to the study were encouraged to fill the questionnaire and contact me if they had any doubts or questions. Some data was collected physically, the participant was told the purpose of the study and with consents, and the questionnaires were filled. After consent was taken and the questionnaires were filled, any questions or queries of the subjects were answered. Once the data were collected, they were screened for completeness, scored and fed to computer. The data were analyzed using Pearson’s product moment correlations and two-way ANOVA. Table 1 presents the results of product moment correlations between academic stress and achievement motivation scores, Tables2 and 3 shows results of two-way ANOVA along with descriptive statistics for mean academic stress and achievement motivation for the significance of mean difference between gender and between courses pursued along with interaction effects.

RESULTS

Table 1

Results of product moment correlations between academic stress and achievement motivation scores

Variable 1	Variable 2	Correlation coefficient	df	P value
Academic stress	Achievement motivation	0.270	118	.006

Between academic stress and academic motivation, a significant and positive correlation was observed ($r=.270$; $p=.006$), revealing that as the academic stress increased achievement motivation also increased linearly and significantly.

Table 2

Mean academic stress scores of male and female college students pursuing various courses and results of two-way ANOVA

Course	Gender	Mean	Std. Deviation
Arts	Male	99.71	27.46
	Female	107.71	24.66
	Total	103.71	26.09

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Course	Gender	Mean	Std. Deviation
Commerce	Male	103.53	20.38
	Female	113.53	20.38
	Total	108.53	20.73
Science	Male	96.50	19.42
	Female	106.50	19.42
	Total	101.50	19.83
Total	Male	99.85	22.63
	Female	109.15	21.53
	Total	104.50	22.48
Test statistics	F (Course)	F _(2, 114) =1.010 ; p=.367	
	F (Gender)	F _(1, 114) =5.261 ; p=.024	
	F (Interaction)	F _(2, 114) =0.028 ; p=.973	

In the case of academic stress, ANOVA revealed a non-significant mean difference between students pursuing various courses ($F=1.010$; $p=.367$). The mean academic stress scores of students pursuing arts, commerce and science course were 103.71, 108.53 and 101.50 respectively, which were statistically the same. However, between genders, a significant mean difference was observed with F value of 5.261 and significance level of .024. The mean values revealed that female students experienced significantly higher academic stress than male students (mean academic stress scores 109.15 and 99.85 respectively). However, the interaction effect between course and gender was found to be non-significant, revealing that pattern of academic stress was the same for male and female students irrespective of the course they were pursuing.

Table 3

Mean achievement motivation scores of male and female college students pursuing various courses and results of two-way ANOVA

Course	Gender	Mean	Std. Deviation
Arts	Male	46.38	10.13
	Female	61.71	26.28
	Total	54.05	21.15
Commerce	Male	88.95	33.27
	Female	100.00	28.76
	Total	94.47	31.18
Science	Male	52.45	13.39
	Female	65.40	25.09
	Total	58.93	20.90
Total	Male	61.88	27.96
	Female	75.07	31.38
	Total	68.48	30.32
Test statistics	F (Course)	F _(2, 114) =32.864 ; p=.001	
	F (Gender)	F _(1, 114) =8.889 ; p=.004	
	F (Interaction)	F _(2, 114) =0.080 ; p=.924	

ANOVA revealed a significant mean difference between students pursuing various courses ($F=32.864$; $p=.001$) in their achievement motivation scores. The mean achievement motivation scores of students pursuing arts, commerce and science course were 54.05, 94.47 and 58.93 respectively. Further, Scheffe's post hoc test revealed that students pursuing

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commerce course had highest achievement motivation scores, followed by students pursuing arts and science courses. Between genders, a significant mean difference was observed with F value of 8.889 and significance level of .004. The mean values revealed that female students had significantly higher achievement motivation than male students (mean achievement motivation scores 75.07 and 61.88 respectively). However, the interaction effect between course and gender was found to be non-significant, revealing that pattern of academic stress was the same for male and female students irrespective of the course they were pursuing.

DISCUSSION

Major findings of the study

- As the academic stress increased achievement motivation also increased linearly and significantly
- Students pursuing commerce course had highest achievement motivation scores, followed by students pursuing arts and science courses
- Course pursued did not have significant influence over academic stress
- Female students experienced significantly higher academic stress as well had higher achievement motivation than male students

The results of the present study are consistent with the studies mentioned earlier. Present study found that academic stress and achievement motivation are significantly and positively related to each other. Ramaprabou and Kanta (2018) did a study on the effect of Academic stress on Achievement motivation among college students and found that moderate stress led to high achievement motivation. However, Nazim and Kumar (2014) reported that academic stress was negatively correlated with achievement motivation. Karaman, Lerma, Veta and Watson (2019) found that locus of control, academic stress, and life satisfaction as a predictor of achievement motivation. Weiner and Kulka (1970) concluded that individuals high in resultant achievement motivation are more likely to take personal responsibility for success than individuals low in achievement motivation.

In the present study it was found that female students experienced significantly higher academic stress as well had higher achievement motivation than male students. The findings of the study by Karaman and Watson (2019), further supports this, where women had higher academic stress in comparison to men. A study by Shekhar and Devi (2012) revealed that female students had higher achievement motivation in comparison to males. The analysis also revealed that students from the science major had higher achievement motivation in comparison to students studying arts. Contradictory findings were revealed by Kala and Shirlin (2017) as there was no significant difference in the achievement motivation of college students with respect to the gender, locality of the college, locality of students' residence and type of the college. Ranganatha and D'Souza (2018) found that female students pursuing professional Courses, experienced higher Stress, whereas, male students in non-professional courses experienced higher stress.

Academic stress had significant relationship with achievement motivation. Female students were found to have higher academic stress and achievement motivations. Students pursuing commerce course had highest achievement motivation, as the completion is more in Indian scenario. While academic stress can impact a student's mental health, it is believed that the way one views the workload can significantly change the way one deals with the work. Viewing the workload as a challenge can only increase the motivation of an individual.

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Acknowledgement

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author declared no conflict of interest.

How to cite this article: Aliya, W.K. (2022). Relationship between Academic Stress and Achievement Motivation: Influence of Gender and Course. *International Journal of Indian Psychology*, 10(4), 2211-2216. DIP:18.01.210.20221004, DOI:10.25215/1004.210