

Research Paper

Academic Stress and Personality in Relation to Gender: A Study on the Undergraduates

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ABSTRACT

Academic stress and personality are particularly useful in attempting to investigate psychological difference between genders. The purpose of the current study was to examine gender difference in academic stress and personality among college going undergraduate students (Male=66, Female=84) ranging from 18-22 years. Participants were randomly selected for the study. Academic stress inventory by Lin and Chen and Neo Five Factor Inventory (NEO-FFI3) by Paul T. Costa and Robert McCrae were administered. A significant gender difference was not found in academic stress. However mean score suggested that female students (Mean=109.417, SD=21.011) experience higher academic stress than the male students (Mean=107.061, SD=17.083). In the Big five factors, females had more levels of neuroticism personality (Mean=39.24, SD=5.715) than Males (Mean=37.59, SD= 5.429). In extraversion, females scored high (Mean= 41.32, SD=5.563) than males (Mean=40.61, SD=4.614). A There was no gender difference in openness to experience and agreeableness. However, a significant gender difference was found in conscientiousness. Females were more conscientious (Mean=43.88, SD= 4.858) than their male counterparts (Mean= 42.29, SD=4.7771). Academic stress is an apparent problem for students nowadays that threatens their physical and mental wellbeing and affects academic performance. Specific personality traits make students more vulnerable to the stressful situations. Moreover, the experience and the perception of situations are gender specific. So, an understanding of the gender difference on academic stress and personality will be helpful to find out individual differences and accordingly design strategies to help students deal with the challenges of life.

Keywords: *Academic stress, Personality, Gender*

Stress is the physical reaction towards an unfavorable stimulus that demands physical, mental or emotional adjustment leading to discomfort and may also lead to future consequences if not solved. Stress among students prevail when they are overloaded and struggling to cope with the challenges of life. Modern life is full of demands and expectations. It is so much high that the web of negativity encompasses the students into

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hidden stress. An optimum level of stress is necessary for better performance but when it exceeds a person's ability to cope, it leads to distress. The stress related to academics is referred to as academic stress. Student's reaction to their academic environment depends on the personality trait they possess and these personality traits cannot be altered easily. Personality traits and the achievement criteria of a student can further lead to academic stress, if the student cannot respond accordingly.

Personality refers to the enduring characteristics of a person which differentiates one individual from the other in relatively and consistent ways. An individual's perception and reaction to a stress situation depends on the personality traits they possess. In this present age, one of the most challenging problems faced by the teacher educator and parents is to understand the dynamics and potentialities of personality traits of the students. Personality traits have an influential role to play in student's life to manage academic related issues which may in turn determine academic performance.

The study of academic stress and personality is particularly useful in attempting to investigate psychological difference between genders. Gender difference in academic stress and personality are often characterized in terms of which gender has higher scores on those aspects. For e.g., women are found to have more academic stress (Graves et al.,2021) and are often found to be more agreeable than men (Feingold, 1994; Costa et al., 2001). This means that female students on average experience higher level of academic stress and are more nurturing, tender minded and altruistic more often than their male counterpart. However, such a finding does not rule out the fact that men may also experience academic stress and might be nurturing, tender minded and altruistic. The main goal of finding gender difference in academic stress and personality is to find out the variation among general patterns of behaviour in male and female, with the knowledge that both the gender can experience stress and possess the full range of most traits.

It has been observed that the experience of stress in men and women vary widely. This is because women are more likely to identify with the feminine gender role and men with the masculine gender role. Studies have suggested that a stress receptor in the brain regulates metabolic response to the stressful situation in male and female differently. Sitz et al.(2006) commented that women are more optimistic and have a decreased level of perceived stress in relation to their male counterpart. Brougham et al. (2009) conducted a study in order to find out the stress, sex difference and coping strategy of college students and found that female students reported an accelerated level of stress than male students. Calagus (2011) documented that there exists a significant difference between male and female students in regards to perception of stress. A wide difference is observed in the attitude of the student towards the subject, lectures, academic programs and classroom. Akhtar (2011) reported that girls are more thought oriented and as such they experience stress more than boys, while boys are more action oriented in dealing with challenging situation. Similar findings were also found by Busari and Adewuyi (2018), Kadapatti (2017), Kiani et al. (2017). Dhakkal (2013) investigated the relationship between gender and academic stress and found no significant gender difference in the level of academic stress. No gender difference was also revealed in the study conducted by Fromel et al. (2020) & Singh and Singh (2014). Karaman et al. (2019) found life satisfaction, locus of control and gender as significant predictors of academic stress and that female students had higher academic stress than their male counterparts.

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Shokri et al, (2007) reported a significant positive correlation between neuroticism and academic stress. Moreover, a significant negative correlation was revealed between extroversion and conscientiousness and academic stress. Nechita et al (2015) investigated the effect of personality on students' academic life and found that personality factors influence the way students learn and evolve throughout their academic period. Alfred et al. (2018) investigated the workload, perceived stress and personality traits among Arts and Science students and found significant stream wise differences in personality. Furthermore, a significant correlation was found between neuroticism and stress.

Objectives

1. To study the academic stress of male and female undergraduate students.
2. To study the personality factors (Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness) of male and female undergraduate students.

Hypotheses

1. There will be no significant difference in academic stress of male and female undergraduate students.
2. There will be no significant difference in personality dimensions (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) of male and female undergraduate students.

METHODOLOGY

The present study used descriptive and inferential statistics to find out difference between genders. Colleges affiliating to Gauhati University were selected on the basis of convenient sampling. A total 150 undergraduate students (Male 66 and Female 84) from both Arts and Science stream, aged 18-22 years were selected for the study. Data was collected through self-administered questionnaires.

Tools for Data collection

- Academic Stress Inventory developed by Lin and Chen (2009) was used to assess the academic stress of the students. The higher the points for each factor, the higher is the degree of stress produced by this factor.
- NEO Five Factor Inventory-3 (NEO-FFI-3) developed by Paul T. Costa and Robert McCrae (1992) was used to provide a brief, comprehensive measure of five domains of personality. It comprises of 12- item scales that measure each domain.

Procedure

Prior to the beginning of the current research, colleges were selected in Guwahati city according to convenient sampling and the permission was taken from the college administration. 150 sample of students including 66 males and 84 female students were selected using simple random sampling technique and those selected were explained the nature and objectives of the study. After proper consent to participate in the study, participants were assessed with Academic stress inventory and Neo five factor inventory. Obtained data were analysed in SPSS software system.

Statistical analysis

To attain the objective of the study and to verify the formulated hypotheses the data were analysed using SPSS version 16 software system. Descriptive statistics including mean, standard deviation and t- test were derived for the sample responses to check the difference in academic stress and personality traits in both genders (Male and Female).

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Ethical consideration

The purpose of the study was purely research oriented with no intention to harm others. The results were kept confidential.

RESULTS

Table 1: Means, SDs and 't' value of academic stress of male and female undergraduate students

Academic stress	Gender	N	Mean	SD	Mean difference	T	Df	P
Overall Academic stress	Female	84	109.417	21.011	-2.356	-.739	148	.461
	Male	66	107.061	17.083				

***P<0.001 indicates significant at 1% level*

Table 1 indicates that in total academic stress no significant gender difference was experienced by male and female undergraduate students where t value was found to be .739 ($P<.01$). So, the null hypothesis that there will be no significant difference in total academic stress with regard to gender stands accepted. However mean score indicates that female students experience greater academic stress (Mean=109.41) in comparison to male students (Mean=107.06).

Table 2: Means, SDs and 't' value of personality factors of male and female undergraduate students

Big five factors	Gender	N	Mean	SD	Mean Difference	T	Df	P-value
Neuroticism	Female	84	39.24	5.715	-1.647	-1.791	148	.075
	Male	66	37.59	5.429				
Extraversion	Female	84	41.32	5.563	-.715	-.842	148	.401
	Male	66	40.61	4.614				
Openness to Experience	Female	84	42.39	5.248	.092	.112	148	.911
	Male	66	42.48	4.642				
Agreeableness	Female	84	38.88	5.630	-.048	-.055	148	.956
	Male	66	38.83	4.790				
Conscientiousness	Female	84	43.88	4.858	-1.593	-2.009	148	.046*
	Male	66	42.29	4.771				

**P<0.05 significant at 5% level*

Table 2 indicates that there is no significant difference between gender in the dimension of neuroticism where t value is -1.791 ($P<.05$). Thus the null hypothesis that there will be no significant difference between genders in the dimension of neuroticism stands accepted. However mean score (Mean = 39.24) indicates that female undergraduate students have more neuroticism personality level than male undergraduate students (Mean =37.59).

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Table 2 indicates that there is no significant difference between gender in the dimension of extraversion where t value is $-.842$ ($p < .05$). Thus, the null hypothesis that there will be no significant difference between genders in the dimension of extraversion stands accepted. However mean score (Mean =41.32) indicates that female undergraduate students have more extraversion personality level than their male counterparts (Mean =40.61).

It is observed from table 2 that there exists no significant difference between gender in the dimension of openness to experience where t value is $.092$ ($P < .05$). Thus, the null hypothesis that there will be no significant difference between genders in the dimension of openness to experience stands accepted.

Table 2 showed that there is no significant difference between male and female undergraduate students in the dimension of agreeableness where t value is $-.055$ ($P < .05$). Thus, the null hypothesis that there will be no significant difference between genders in the dimension of agreeableness stands accepted.

It is also observed from table 2 that there is a significant difference between male and female students in the dimension of conscientiousness where t value is -2.009 ($P > .05$). Thus, the null hypothesis that there will be no significant difference between genders in the dimension of conscientiousness stands rejected. Mean score (Mean= 43.88) also indicates that female students have more conscientiousness personality level than their male counterparts (Mean=42.29).

DISCUSSION

Academic stress and gender

It is evident from the analysis that there exists a difference between male and female undergraduate students on academic stress. It has been found that the female students experience more stress than their male counterparts. This may be due to the fact that there is a difference between gender in perception and attitude towards life. Female's students are sincere and sensitive by nature whereas males are generally easy going and happy go lucky. This research finding was supported by the research results of et al. (2006), Brougham, et al., (2009), that a wide difference is seen in the attitude of the student towards the subject, lectures, academic programs and classroom and that female students reported an escalated level of stress than male students This is because females are more likely to identify with the feminine gender role and males with the masculine gender role. Previous studies have suggested that a stress receptor in the brain regulates metabolic response to the stressful situation in male and female differently. Calagus (2011) documented that there exists a significant difference between male and female students in regards to perception of stress. A wide difference is observed in the attitude of the student towards the subject, lectures, academic programs and classroom. Kostic, et al., (2021) reported that female students were significantly more stressed during the situation of COVID 19 than their male counterparts and that females significantly predicted higher perceived stress.

Personality dimensions and gender

Gender differences in Neuroticism

It is evident from the analysis that there is a difference between male and female undergraduate students in the personality dimension of neuroticism. The present results indicated that males have lower neuroticism personality than females. This implies that males have lower degree of anxiety, anger, hostility, depression, impulsivity and vulnerability whereas females have negative emotions such as feeling anxious, nervous and

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tense. Thus, male students are emotionally more stable than female ones. This finding is in alignment with the study conducted by Djudivah et al. (2016), Soto (2015) Verduyn & Brans, (2012) found that females are more oriented with feelings, have more negative emotions because of the hormonal changes and are more submissive than males. Males on the other hand are assertive and are driven by ideas.

Gender differences in Openness to experience

In the Big Five Factor of openness to experience, there exists no difference between male and female students. This implies that both the gender have an eagerness to learn new things, share ideas, perform newer things, acknowledge ideas, have higher imaginative capacity and adapt themselves easily to stressful situations. The reason for this may be the fact that both the student group share more or less similar academic and college environment. Though many previous studies have reported gender differences in this dimension (Weisberg et al., 2011), the present study shows that there is no difference between male and female students. So, these students should be motivated and reinforced in managing a new learning situation that facilitates them towards higher academic achievement and lesser degree of academic stress.

Gender differences in Extraversion

The findings indicated that in the dimension of extraversion, there exists difference between male and female students. This implies that female students are more extraverted than their male counterpart. In other words compared to the male students, the female students are sociable, assertive, energetic, active and optimistic. Literature shows males as basically introverted with low confidence levels. It seems that they may underestimate themselves in terms of social relationship, communication skills. This result is in agreement with findings of (Feingold, 1994; Costa et al., 2001) that gender differences are small on the overall domain level of extraversion (with women scoring higher). The minute gender difference could be due to the differences in various directions at the facet level. Women have been observed to score high than men on warmth, gregariousness and positive emotions whereas men score higher on Assertiveness and excitement seeking. Eysenck (1963) reported that individual differences on extroversion and introversion are rooted in the conscious mind.

Gender differences in Agreeableness

The analysis revealed that there is no difference between male and female undergraduate student on the dimension of agreeableness. Both the gender are fundamentally altruistic and sympathetic. They have the tendency towards cooperation, maintenance of social harmony, are liked by others due to their behavior and easy accessibility.

Gender differences in Conscientiousness

It is clear from the analysis that there is a significant difference between male and female students in conscientiousness. Males are less conscientious than females. This implies that females report engaging in more empathic responding, are hardworking, reliable, self-disciplined, organized and reflect the ability to exert self-control to follow rules or maintain goal pursuit. Females possess better socially prescribed impulse control that promotes goal directed behavior such as thinking before acting, delaying gratification and prioritizing tasks. This finding is similar with results of Fenigold, 1994; Costa et al., (2001) and Emily.R, Bunnett (2020).

CONCLUSION

The finding of the present study has important implications for students, parents, educators, counselors and researchers. There is an urgent need to develop a congenial and conducive academic culture, so that stress can be minimized for better academic performance and wellbeing. Further teachers and parents may play a crucial role to minimize the level of stress experience by extending support. While framing curriculum it is crucial to take into account student's needs and interest. A good rapport between the teacher and taught is an important component in the teaching learning process where students should be given ample opportunities to incorporate their own ideas too. This study's findings have provided relevant information in order to reduce stress, more specific to gender. Effective stress management programmes and adaptive sessions could have more emphasis included into classes. Such findings can be used in future studies as well for required guidance in undergraduate students related to gender.

By examining the Big Five domains between gender, differences were evident for the domains of neuroticism, extraversion and conscientiousness except openness to experience and agreeableness. The study of personality differences is significant to our understanding of general human variation, though it is not without controversy. Research on gender differences in personality has proven to be controversial, with debate concerning the causes of differences. It is clear from the findings that male and females vary in some aspects of personality. All of the mean differences we found and the differences revealed in previous studies are small to moderate. Though the mean difference in personality (neuroticism, extraversion and conscientiousness) may be important in shaping human experience and human culture, they are not so large to prevent effective communication between genders. These differences truly point towards the effect of society and culture to which an individual belongs to because it plays a crucial role in the shaping of one's personality. Since gender differences seem to exist in academic stress further investigation is warranted to handle reduction of student stress and development of coping strategies.

REFERENCES

- Allred, A., Granger, M. & Hogstrom, T. (2013). The relationship between academic major, personality type and stress in college students. *Eukaryon*, 9, 1-4.
- Annalakshmi, N. & Jayanthi, A. (2018). The outcome of stress in learning Environment. *International Journal of Informative and Futuristic Research*, 5(12), 9433-9437.
- Akhtar, Z. (2012). Adjustment pattern among private and government school students. *Journal of Psychological Researches*, 56(2), 97- 104
- Brougham, R.R., Zail, C.M., Mendoza, C.M. et al. (2009). Stress, Sex Differences, and Coping Strategies among College Students. *CurrPsychol* 28, 85–97.
- Busari, A. O. & Omoponle, A. H. (2018). Psycho-environmental predictors of academic among female adolescents in Oyo State Schools of Nursing. *Open Science Journal of Psychology*, 5(1), 1-8. <http://www.openscienceonline.com/journal/osjp>
- Calagus, G., (2011). College academic stress: Differences along gender lines. *Journal of Social and Developmental Sciences*, (5): 194-201. DOI: 10.22610/jsds.Vii5.644
- Costa, P. J., Terracciano, A., & McCrae R. R. (2001). Gender differences Personality traits across cultures: Robust and surprising findings *Journal of Personality and Social Psychology*, 81 (2), 322–331. Doi: 10.1037/0022-3514.81.2.322.
- Costa, P. T., & McCrae, R. R. (1992). Revised NEO personality inventory (NEO-PI-R) and NEO five-factor inventory (NEO-FFI): Professional manual. Odessa, FL: Psychological Assessment Resources, Inc.

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- Dhakal, S. (2013). An assessment of academic stress among students of bachelors' level. *Psychological Studies Journal of Central Department of Psychology, II* (2), 12-15.
- Emily, R, Bunnnett (2020). Gender differences in Perceived traits of Men and Women. *Wiley Online Library*. <https://doi.org/10.1002/9781119547174.ch207>
- Eysenk, H. Biological Basis of Personality. *Nature*199, 1031-1034 (1963). <https://doi.org/10.1038/1991031a0>
- Feingold, A. (1994). Gender differences in personality: a meta-analysis. *Psychological Bulletin*, 116 (3), 429-456.
- Florina Nechita, D.O. Alexandru, R.Turcu- Stiolica, D. Nechita. (2015). The influence of Personality Factors and Stress on Academic Performance. *Current Health Science Journal*. Vol. 41, No.1
- Fromel, K., Safar, M., Jakubec, L., Groffik, D. &Zatkal, R. (2020). Academic stress and physical activity in adolescents. *HindawiBioMed Research International, 2020*, 1-10.
- Gender differences in five factor model of personality and sensation seeking. Soudeh Rahmani and Masoud Gholamali Lavasani /*Procedia - Social and Behavioral Sciences* 46 (2012) 2906 – 2911
- Graves, B. S., Hall, M. E., Dias-Karch, C., Haischer, M. H., &Apter, C. (2021). Gender differences in perceived stress and coping among college students. *PloS one, 16*(8), e0255634. <https://doi.org/10.1371/journal.pone.0255634>
- Kadapatti, M. G. (2017). Prevalence of academic stress among students. *International Journal of Home Science, 3* (3), 461-463.
- Karaman, M. A., Lerma, E., Vela, J. C. & Watson, J. C. (2019). Predictors of academic stress among college students. *Journal of College Counseling, 22*, 41-55.
- Kiani, Z. S., Latif, R., Bibi, A., Rashid, S. & Tariq, A. (2017). Effect of academic stress on the mental health of college and university students. *MDSRC - 2017 Proceedings*, 27-28
- Kostic,J., Zikic,O., Dordevic,V.et al,(2021). Perceived stress among university students in South east Serbia during the COVID-19 outbreak. *Ann Gen Psychiatry* 20-25. <https://doi.org/10.1186/s12991-021-00346-2>
- Lin Y M., & Chen F.S (2009). Academic stress inventory of students and colleges of technology. *World Transactions on Engineering and Technology Education*.Vol.7, No. 2
- (2015). The influence of Personality Factors and Stress on Academic Performance. *Current Health Science Journal*. Vol. 41, No.1
- Shokri, O., Kadivar, P., & Daneshvarpoor, Z. (2007). Gender differences in subjective well-being: The role of personality traits. *Iranian journal of psychiatry and clinical psychology, 13* (3), 280-289. [In Persian]
- Singh, B. R. & Singh, R. (2014). Academic stress of school going adolescents. *Indian Streams Research Journal* 3(12), 1-4
- Sitz, E.H., Poche, N., (2006). Gender Differences in Relationship between Optimism and
- Soto, C. J., (2015). Is happiness good for your personality? Concurrent and prospective relations of the big five with subjective well-being. *Journal of Personality*. Vol. 83, No. 1, p. 45-55. Doi:10.1111/jopy.12081
- Trivers, R.L. (1972).” Parental investment and sexual selection”, in *Sexual Selection and the Descent of Man*, ed.B. Campbell (Chicago: Aldine), 136-179
- Verduyn, P. and Brans, K. (2012). The relationship between extraversion, neuroticism and aspects of trait affect. *Personality and Individual Differences*. Vol. 52, p. 664-669

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Weisberg, Y. J., DeYoung, C. G., & Hirsh, J. B. (2011). Gender differences in personality across the ten aspects of the Big Five. *Frontiers in Psychology*, 2(178), 1-11. <https://doi.org/10.3389/fpsyg.2011.00178>

Yanna J. Weisberg, Colin G. DeYoung and Jacob Hirsh. (2011). Gender differences in Personality across ten aspects of the Big Five, *Personality Science and Individual Differences*. Vol 2

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