

Relationship between Academic Stress and Internet Addiction among College Students

Lancy D'Souza^{1*}, Manish S², Shravan Raj M.S.³

ABSTRACT

The present study assesses the relationship between the academic stress and internet addiction among college students studying in Mysuru city. Academic stress inventory (Lin & Chen, 2009) and Internet addiction test-IAT (Young, 1998) were administered to a sample of 120 college students. Academic stress of students was measured in 7 domains and internet addiction in 6 domains. Data were subjected to product moment correlation and stepwise multiple regression to find out the relationship between stress and addiction, including the domains of internet addiction which predict stress. Results revealed that a large majority of the students had moderate to high levels of internet addiction and academic stress. Almost all the domains of internet addiction were significantly and positively correlated with the domains of stress. Further, stepwise multiple regression revealed that out of the seven domains of stress, only Peer stress was the major predictor of stress. Strategies for decreasing the extent of stress and addiction among students have been delineated.

Keywords: *Internet Addiction, Academic Stress, College Students*

In today's world, stress is the buzz word. Even students are not spared from the stress. Studies have revealed that students in both professional and non-professional courses experience stress in different ways. Waghachavare, Dhumale, Kadam, and Gore (2013), opined that various studies across the globe have emphasized that students undertaking professional courses, such as medical and dental studies, are subjected to higher stress. It is known fact that excessive stress could lead to psychological problems like depression and anxiety. Further, their study indicated that students from all the three fields studied were exposed to stress and academic factors were one of the most important stressors. In addition, study by Agarwal and Chahar (2007) revealed that students studying technology are experiencing role overload, role stagnation and self-role distance.

¹ Associate Professor of Psychology, Maharaja's College, University of Mysore, Mysore, India

² Student, III B.A. JEPsy, Maharaja's College, University of Mysore, Mysore, India

³ Student, III B.A. JEPsy, Maharaja's College, University of Mysore, Mysore, India

*Responding Author

Received: March 27, 2018; Revision Received: April 5, 2018; Accepted: May 20, 2018

Relationship between Academic Stress and Internet Addiction among College Students

The internet is a new tool that is evolving into an essential part of everyday life all over the world (Nalwa & Anand, 2003) and its use increases especially among young people. In spite of the widely perceived merits of this tool, psychologists and educators have been aware of the negative impacts of its use, especially the over or misuse and the related physical and psychological problems (Greenfield, 2000). One of the most common of these problems is internet addiction (Murali & George, 2007; Shapira, Lessig, Goldsmith et al., 2003; Young, 1998). This problem is a raising phenomenon affecting people with varying frequency around the world and has produced negative impacts on the academic, relationship, financial, and occupational aspects of many lives (Chou & Hsiao, 2000; Griffiths, 1999; Young, 1998). Internet addiction is typically characterized by psychomotor agitation, anxiety, craving (Ferraro, Caci, D'Amico et al., 2007), depression, hostility, and substance experience (Ko, Yen, Chen et al., 2006; Yen, Ko, Yen et al., 2007), preoccupation, loss of control, withdrawal, impairment of function, reduced decision-making ability (Ko, Yen, Chen et al., 2005),

There are a number of emotional factors which may be related to college students' internet addiction (Kandell, 1998). Among these factors the most remarkable are depression, anxiety, and stress. Research on internet addiction and depression demonstrated that the overuse of the internet, which results in a disruption of the normal lives of an individual and the people around him, was associated with an increase in the frequency of depression (Kraut et al., 1998, 2002; McKenna & Bargh, 2000; Nie, Hillygus, & Erbring, 2002). Because, excessive internet use can displace valuable time that people spend with family and friends, which leads to smaller social circles and higher levels of loneliness and stress (Nie et al., 2002). Other conclusions of excessive usage have been documented as neglect of academic, work, and domestic responsibilities, disruption of relationships, social isolation, and financial problems (Griffiths, 2000; McKenna & Bargh, 2000).

The purpose of this study is to assess the relationship between internet addiction and academic stress among college going students. Several studies have been conducted independently on internet addiction and academic stress on adolescents and adults. In this study an attempt is made to find out the relationship between internet addiction and academic stress and the extent of contribution contributed by internet addiction to stress among college going students, since these issues are not explored in detail among the college students.

METHOD

Sample

The sample for the study was selected from various colleges of Mysuru city. A total of 120 students studying in Arts, Science and commerce disciplines were distributed with questionnaires-both Internet addiction test and academic stress inventory along with demographic details and requested to return them at the earliest.

Tools

1. **Personal data sheet:** Personal and socio-demographic information is collected in this sheet.

2. **Academic stress Inventory (Lin & Chen, 2009):**

Academic stress (developed by Lin and Chen, 2009) contained 34 statements on 7 domains stress. They were Stress from teachers, Stress from results, Stress from tests, Studying in group stress, Peer stress, Time management stress and Self-inflicted stress. The brief description of them is as follows: 1. Stress from teachers: including teaching materials, teaching and exercise items. 2. Stress from results: stress from parents, including conflicts between expectations and opinions and drops in grades. 3. Stress from tests: worry about how to prepare for a test and redo the compulsory courses. 4. Studying in group stress: included exercise reports, grouping, etc. 5. Peer stress: included academic competition, peer interferences, etc. 6. Time management stress: social activities and student association, time management and choices, etc. 7. Self-inflicted stress: such as self-expectation, interests of course selection, etc. The respondents had to answer the scale using Likert's five-point scale and the answering methods were from the answers of the actual six months' experiences. The α value of the overall academic stress inventory was 0.90. High scores indicate higher stress in all the domains.

3. **Internet addiction scale**

Internet Addiction Test (IAT) was developed by Dr. Kimberly Young, 1998 and it consists of 20 questions was adopted to evaluate the respondents' level of internet addiction. Each item is scored using a five-point Likert's scale, a graded Response can be selected (0 = "does not apply" to 5 = "always"). It covers the degree to which internet use affect daily routine, social life, productivity, sleeping pattern, and feeling. The minimum score is 20 while the maximum is 100 and the higher the score the greater the level of internet addiction. The types of Internet-user groups were identified in accordance with the original scheme of Young and the score < 20 indicate normal users. The scores ranging from 20 to 49 indicate minimal users, while scores from 50 to 79 indicate moderate users and the scores from 80 to 100 indicate excessive users. The minimal users were classified as problematic internet users, while moderate and excessive users were categorized as internet addicts. The instrument has exhibited good psychometric properties in previous researches. The reliability for this questionnaire is 0.899 in Cronbach's Alpha.

Procedure

The test was administered to the college going students by asking them to fill up the relevant demographic details. Later they were requested to answer both internet addiction test and academic stress inventory. They were asked to indicate their responses in the respective sheets given to them. Once the data were collected, they were screened for completeness, scored and fed to computer. The data were analyzed using Pearson's product moment correlation and stepwise multiple regression analysis.

Relationship between Academic Stress and Internet Addiction among College Students

Table 1 represent results of Pearson’s product moment correlations between various domains of academic stress and shyness and Table 2 shows results of stepwise multiple regression for total stress scores by various domains of shyness.

Table 1, Distribution of the selected sample by levels of Internet addiction and academic stress

Levels		Internet addiction	Academic stress
Low	Frequency	22	6
	Per cent	18.4%	5.0%
Moderate	Frequency	61	63
	Per cent	50.8%	52.5%
High	Frequency	37	51
	Per cent	30.8%	42.5%
Total	Frequency	120	120
	Per cent	100.0%	100.0%
Test statistics	Chi-Square =19.35; p=.001		Chi-Square =45.15; p=.001

As far as internet addiction is considered, a majority of the selected sample of 61 (50.8%) students had moderate levels of internet addiction, followed by 30.8% of them had high levels of internet addiction and remaining 18.4% of them had low levels of addiction. When chi-square test was applied, a significant difference between these frequencies (Chi-Square =19.35; p=.001) confirming that majority of the sample selected had moderate levels of internet addiction. On the whole we find 81.6% of the selected sample had moderate to high levels of internet addiction.

In the case of academic stress, on the whole we find that out of 120 selected students, majority of 63 (52.5%) them of them had moderate levels of academic stress and , 51 (42.5%) of them experienced high levels of academic stress. Further, chi-square test revealed significant difference between these frequencies (Chi-Square =45.15; p=.001) confirming that majority of the sample selected had moderate to high levels of academic stress, and none of them had low levels of academic stress.

Table 2, Results of product moment correlations between factors of academic stress and internet addiction

Variable 1 Factors of academic stress	Variable 2	Correlation coefficient	Significance
Stress from teachers	Internet addiction	0.260	.004
Stress from results	Internet addiction	0.257	.005
Stress from tests	Internet addiction	0.264	.004
Studying in group stress	Internet addiction	0.231	.011
Peer stress	Internet addiction	0.283	.002

Relationship between Academic Stress and Internet Addiction among College Students

Variable 1 Factors of academic stress	Variable 2	Correlation coefficient	Significance
Time management stress	Internet addiction	0.264	.004
Self-inflicted stress	Internet addiction	0.147	.110
Total academic stress	Internet addiction	0.346	.001

From the above table it is clear that internet addiction scores were significantly and positively related to most of the factors of academic stress. Internet addiction was found to be significantly and positively related to stress from teachers ($r=0.260$; $p=.004$), Stress from results ($r=0.257$; $p=.005$), Stress from tests ($r=0.264$; $p=.004$), Studying in group stress ($r=0.231$; $p=.011$), Peer stress ($r=0.283$; $p=.002$), Time management stress ($r=0.264$; $p=.004$), and total academic stress scores ($r=0.346$; $p=.001$). In other words, as the academic stress both in individual dimensions (except for self-inflicted stress) and total scores increased, internet addiction also increased linearly and significantly.

REGRESSION ANALYSIS

Table 3, Summary results of stepwise multiple regression or prediction of academic stress due to internet addiction

Model	Variables Entered	Variables Removed	R	R Square	Adjusted R Square
1	Peer stress	-	.283	.080	.072
Beta coefficients					
		Step 1		Step II	
1	Peer stress	.283		-	

Regression analysis: When all the scores of 6 factors of academic stress scale were regressed on the internet addiction scores, stepwise multiple regressions revealed that only one factor of academic stress was found to be the best predictors of internet addiction. The first factor entered into the equation was peer stress with correlation coefficient of .283, squared R value of .080 and variance of .072. In other words, peer stress contributed to 7.2% of the internet addiction among the present sample. The beta coefficient for the first predicted model peer stress at steps was 0.283.

DISCUSSION

Major findings of the study

- A large majority of the students had moderate to high levels of internet addiction and academic stress
- As the academic stress increased, internet addiction also increased linearly and significantly.
- Peer stress factor of academic stress was found to be the major predictor of internet addiction.

Relationship between Academic Stress and Internet Addiction among College Students

From the above findings it is clear that the prevalence of addiction and stress is slowly spreading amongst the college students as there is a significant association between Academic stress and Internet addiction in this present study. Further, peer stress factor was found to be the micro level predictors of the internet addiction. Peer pressure may be defined as the insistence and encouragement of the same age group individuals to make individual to do something (Santor, Messervey & Kusumakar, 2000). Also a relationship between peer pressure and drug and alcohol addiction, and smoking was observed (Shilts, 1991; Kiran-Esen, 2003). The studies related with the internet addiction pointed out that addict adolescents interact less with peers and have incompetent relationship quality (Harman, Hansen, Cochran & Lindsey, 2005). It may be concluded according to the results of these studies that internet addiction and peer pressure are related variables.

Studies have revealed that academic stress and internet addiction are common among children and adolescents, and are a main concern of parents. Koet *al.* (2005) reported that approximately 20% of youth are internet addicts; Academic Stress is an important factor accounting for variation in academic achievement. It also contributes to major mental health hazards, problems both physical and mental stress related diseases. Stress makes a significant contribution to the prediction of subsequent school performance and act as a negative predictor of academic performance in college.

The results show that academic stress prospectively predicted internet addiction in students. Anxiety and stress are potent cause of internet addiction. The findings of this study are consistent with suggestion in other studies which linked internet addiction positively to anxiety and stress. Study by Ko et al (2005), revealed that depression, anxiety, and stress were predicted positively internet addiction. Recent studies on internet addiction demonstrated that internet addiction related positively to decrease in social interactions, depression, loneliness, and lower self-esteem (Ko, Yen, Chen et al., 2005). The implication of the finding is that the more stress and anxiety a student has the more he/she will be addicted to the internet. Studies have shown significant relationship between Problematic Internet Use and procrastination. It has important implications. It means that the internet is being used as a coping mechanism to stress. Specifically, involves avoidance of cognitive task so as to participate in activities that could distract an individual from the things that he/she supposed to do. General procrastination is also believed to be related to negative affect and cognitive imbalance with signs and symptoms of depression and high level of perceived stress. This adversely affects academic performance which results in academic stress.

Findings from Hardie and Tee (2007) support the finding of the current research when they observed that moderate and Problematic Internet Use was evenly engaged-in by both males and females. Moreover the result of this study implies that adolescents with high levels of academic stress were more likely to display more depressive symptoms. The indication of this is that adolescents that are preoccupied with academic stress are most likely to be prone to internet addiction. Academic achievements of students with excessive internet use are also negatively affected. It follows therefore that students addicted to internet are more involved

Relationship between Academic Stress and Internet Addiction among College Students

in it than their studies. Due to excessive internet use they perform poorly in their academic pursuits, performance.

A study conducted at a small private university in Pittsburgh, Pennsylvania found that the longer the time spend on the internet the lower the Grade Point Average (GPA) of the students (Mishra et al., 2014). Most of the time spent on the internet by students are social networking system (SNS) and online gaming activity and it shows the inability of the students to avoid misuse of the internet (Livingstone & Helsper, 2010). The internet addiction also led to academic failure and negative consequences to campus life (Chou, Condrón & Belland, 2005; Douglas et al., 2008). The poor academic performance will force the students to drop out from universities or colleges (Li et al., 2003). The study among medical students at the Army Medical College, Rawalpindi, India, found that the longer the students spent time on the internet, the less their marks in the professional examination (Khan et al., 2016). A similar study among students in South Korea revealed that students who were using the internet for educational purposes obtained a better academic performance. In contrast, a lower academic achievement was associated with the misuse of the internet for a social and recreational purpose (Kim, 2011). Findings from a research done to see the correlation of internet addiction to academic performance have shown that adolescents often missed their classes and have low social skills due to the misuse of the internet (Leung & Lee, 2012).

Studies have shown that adolescents used Internet as a means of relieving their stress, (Velezmoro et al, 2010) and regulating their negative moods. Many empirical findings have revealed significant relationship between high levels of academic stress and Internet addiction among adolescents. For example, adolescents with tremendous levels of stress are reported to be more addicted to Internet gaming. Internet addiction played a mediating role in the relationship between academic stress and school maladjustment among adolescents. In addition, high levels of academic stress were associated with high levels of Internet addiction despite social support. Some researchers observe that internet addiction has a lot of negative effects one's mental and physical health. Parents, teachers and state officials should be made to be aware of the danger of internet.

REFERENCES

- Agrawal, R.K. & Chahar, S.C. (2007). Examining role stress among technical students in India, *Social Psychology of Education, 10*, 77–91. Retrieved from doi:10.1007/s11218-006-9010-y
- Chou & Hsiao, 2000; Chou, C., Condrón, L., & Belland, J.C. (2005). A review of the research on Internet addiction. *Educational Psychology Review, 17*(4), 363-388.
- Douglas, A.C., Mills, J.E., Niang, M., Stepchenkova, S., Byun, S., Ruffini, C., Lee, S.K., Loutfi, J., Lee, J.K., Atallah, M., & Blanton, M. (2008). Internet addiction: Metasynthesis of qualitative research for the decade 1996-2006. *Computers in Human Behavior, 24*(6), 3027- 3044.
- Ferraro, G., Caci, B., & D'Amico, A., et al., 2007. Internet addiction disorder: An Italian study. *Cyber Psychology & Behavior, 10*, 170–175.

Relationship between Academic Stress and Internet Addiction among College Students

- Greenfield, D. N., (2000). Psychological characteristics of compulsive internet use: A preliminary analysis. *Cyber Psychology & Behavior*, 5, 403-412.
- Griffiths, M.D. (1999). Internet addiction: fact or fiction? *Psychologist*, 12, 246-251.
- Hardie E, Yi-Tee M (2007). Excessive Internet use: The role of personality, loneliness and social support networks in Internet addiction. *Australian Journal of Emerging Technologies and Society*, 5(1): 33-47.
- Harman, J.P., Hansen, C.E., Cochran, M.E & Lindsey, C.R. (2005). Liar, liar: internet faking but not frequency of use affects social skills, self-esteem, social anxiety, and aggression. *CyberpsycholBehav.* 8(1), 1-6.
- Kandell, J. J., (1998). Internet addiction on campus: The vulnerability of college students. *Cyber Psychology & Behavior*, 1, 11-17.
- Khan, M.A., Alvi, A.A., Shabbir, F., & Rajput, T.A. (2016). Effect of Internet addiction on academic performance of medical students. *Internet Addiction and Medical Students*, 11(2), 48-51.
- Kim, S. (2011). *Effects of Internet use on academic achievement and behavioral adjustment among South Korean adolescents: mediating and moderating roles of parental factors*. (Doctoral dissertation, Syracuse University, United States). Retrieved from http://surface.syr.edu/cgi/viewcontent.cgi?article=1061&context=cfs_etd.
- Kıran-Esen, B. (2009) Adolescents' internet addiction is predicted by peer pressure and perceived social support, *NEWWSA*, 4 (4), 1331-1340.
- Ko, C. H., Yen, J. Y., Chen, C. C. et al., (2005). Gender differences and related factors affecting online gaming addiction among Taiwanese adolescents. *Journal of Nervous & Mental Disease*, 193, 273-277.
- Ko, C. H., Yen, J. Y., Chen, C. C. et al., (2006). Tridimensional personality of adolescents with internet addiction and substance use experience. *Canadian Journal of Psychiatry*, 51, 887-894.
- Ko, C.H., Yen, J.Y., Yen, C.F., Chen, C.C., Yen C.N & Chen, S.H. (2005). Screening for Internet addiction: an empirical study on cut-off points for the Chen Internet Addiction Scale. *Kaohsiung J Med Sci*, 21, 545-551.
- Kraut, R., Lundmark, V., Patterson, M., Kiesler, S., Mukopadhyay, T., & Sherlis, W., (1998). Internet paradox: A social technology that reduces social involvement and psychological well being? *American Psychologist*, 53, 1017-1031.
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A., (2002). Internet paradox revisited. *Journal of Social Issues*, 58, 49-74.
- Leung, L., & Lee, P.S.N. (2012). Impact of Internet literacy, internet addiction symptoms, and Internet activities on academic performance. *Social Science Computer Review*, 30(4), 403-418. Retrieved from <https://doi.org/10.1177/0894439311435217>
- Li, Y., Zhang, X., Lu, F., Zhang, Q. & Wang, Y. (2014). Internet addiction among elementary and middle school students in China: A nationally representative sample study. *Cyberpsychol Behavior Social Network*, 17(2), 111-116.
- Lin, Y.M. & Chen, F.S. (2009). Academic stress inventory of students at universities and colleges of technology, *World Transactions on Engineering and Technology Education*, 7 (2), 157-162.
- Livingstone, S., & Helsper, E. (2010). *Balancing opportunities and risks in teenagers' use of the Internet: The role of online skills and Internet self-efficacy*. *New Media & Society*, 12, 309-329.
- McKenna, K. Y. A., & Bargh, J. A., (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review*, 4, 57-75.

Relationship between Academic Stress and Internet Addiction among College Students

- Mishra, S., Draus, P., Goreva, N., Leone, G., & Caputo, D. (2014). The impact of Internet addiction on university students and its effect on subsequent academic success: A survey based study. *Issues in Information Systems*, 15(2), 344-352.
- Murali, V., & George, S. (2007). Lost online: An overview of internet addiction. *Advanced Psychiatry Treatment*, 13, 24-30.
- Nalwa, K. and Anand, A.P. (2004). Internet Addiction in Students: A cause of Concern. *Cyber Psychology and Behavior*, 6(6), 653-656.
- Nie, N. H., Hillygus, D. S., & Erbring, L., (2002). Internet use, interpersonal relations, and sociability: A time diary study. In B. Wellman & C. Haythornthwaite (Eds.), *The internet in everyday life* (pp. 215–243). Oxford: Blackwell.
- Razzino, B. E., Ribordy, S. C., Grant, K., Ferrari, J. R., Bowden, B. S. & Zeisz, J. (2004). Gender related processes and drug use: Self- expression with parents, peer group selection, and achievement motivation, *Adolescence*, 39 (153)
- Santor, D. A., D. Messervey, A.D. & Kusumakar, V. (2000). Measuring peer pressure, popularity, and conformity in adolescent boys and girls: predicting school performance, sexual attitudes, and substance abuse, *Journal of Youth and Adolescence*, 29 (2), 163-182.
- Shapira, N. A., Lessig, M. C., Goldsmith, T. D. et al., (2003). Problematic internet use: Proposed classification and diagnostic criteria. *Depression & Anxiety*, 17, 207–216.
- Shilts, L. (1991). The relationship of early adolescent substance use to extracurricular activities, peer influence, and personal attitudes, *Adolescence*, 26 (103), 613-617.
- Simon-Morton, B. et al. (2001). Peer & parent influences on smoking and drinking among early adolescents, *Health Education and Behavior*, 28 (1), 95-113.
- Velezmoro et al., (2010) R. Perceived stress, sensation seeking, and college students' abuse of the Internet. *Computers in Human behavior*, 26 (6).1526-1530.
- Waghachavare, V.B., Dhumale, G.B., Kadam, Y. R & Gore, A.D (2013). A Study of Stress among Students of Professional Colleges from an Urban area in India, *Sultan Qaboos Univ Med J.*, 13 (3), 429-436.
- Yen, J. Y., Ko, C. H., Yen, C. F. et al., (2007). The comorbid psychiatric symptoms of Internet addiction: Attention deficit and hyperactivity disorder (ADHD), depression, social phobia, and hostility. *Journal of Adolescent Health*, 41(1), 93-98.
- Young, K. S. (1996). Internet addiction: The emergence of a new clinical disorder. Paper presented at the 104th annual meeting of the American Psychological Association, August 11, Toronto, Canada.
- Young, K. (1998) Internet addiction: the emergence of a new clinical disorder. *Cyberpsychol Behav*, 3, 237-244.

Acknowledgments

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

Conflict of Interests: The author declared no conflict of interests.

How to cite this article: D'Souza L, Manish S & Raj S (2018). Relationship between academic stress and internet addiction among college students. *International Journal of Indian Psychology*, 6(2), 100-108. DIP: 18.01.010/20180602, DOI: 10.25215/0602.010