

Internet Addiction and Sleep Quality among Post Graduate Students

Alinta C Thomas^{1*}, Vigraanth Babu K G²

ABSTRACT

The study intends to analyse internet addiction and sleep quality among post graduate students within 20-25 years of age group from different parts of Kerala. The sample includes 261 post graduate students were 78 males and 183 females. Internet Addiction Test (IAT) was developed by Young (1998) and it consists of 20 questions was adopted to evaluate the respondents' level of internet addiction of the selected sample and the Pittsburgh Sleep Quality Index (Buysse et.al., 1989) was used to assess the extent of sleep quality among the sample selected. Descriptive statistics, Mann-Whitney U Test and Spearman's correlation test was used to study the data. The findings showed there was no significant relationship between internet addiction and sleep quality among post graduate students. The study further revealed that there is no significant difference between internet addiction and sleep quality of males and females.

Keywords: *Internet Addiction, Sleep Quality, Post Graduate Students*

According to Potenza (2006), the word “addiction” originated from “addicere” in Latin, meaning “bound to” or “enslaved by”. Goodman (1990), defined “addiction as a process whereby behavior that can function both to produce pleasure and also escape from internal discomfort, is employed in a pattern characterized by recurrent failure to control the behavior (powerlessness) and continuation of the behavior despite significant negative consequences.

The word “Internet addiction”, coined by Goldberg, was originally used derogatively to define effects of excessive internet use on personal lives. Generally, addiction is defined as “a compulsive, uncontrollable dependence on a chemical substance, habit or practice to such a degree that either the means of obtaining or ceasing use may cause severe emotional, mental, or physiological reactions” (Mosby's Medical Dictionary, 2009). Young (1999), claims “Internet addiction is a broad term that covers make sure you follow the same pattern throughout the document for example, i can see the paragraphs are intended in few places and not in others a wide variety of behaviors & impulse control problems”.

¹M.Sc. Psychology, Department of psychology, Kristu Jayanti College(autonomous), Bangalore, India.

²Assistant professor, Department of psychology, Kristu Jayanti College(autonomous), Bangalore, India.

*Corresponding Author

Received: April 23, 2021; Revision Received: June 16, 2021; Accepted: June 30, 2021

Internet Addiction and Sleep Quality among Post Graduate Students

Sleep is a state of rest of the body and mind. During sleep the nervous system is inactive, muscles are relaxing and the person is in semiconscious/unconscious state. Through sleeping immune, nervous, skeletal and muscular systems are restored and this maintains the mood, memory, and cognitive functions. Sleep occurs in repeating periods, in which body shifts between two modes known as REM (rapid eye movement) and non-REM sleep. REM sleep is also known as active sleep and non-REM as quiet sleep quality can be defined as a person's satisfaction of sleep experience, integrating aspects of sleep initiation, sleep quality and refreshment upon awakening. Poor sleep quality disrupts the sleep and the person feels tired (Harvey et al, 2008). Excessive internet use is associated with sleep disruption. Sleep deprivation can lead to negative outcomes such as fatigue and even a compromised immune system. Excessive exposure to blue light emitted from the screens of internet-connected devices can also disrupt the sleep-wake cycle, making sleep more difficult.

Internet addiction has been a major behavioral disorder over the past decade. Prior meta-analytic review has demonstrated the association between Internet addiction and psychiatric disorders, as well as sleep related disorders. In the present study an attempt is made to find out the relationship between internet addictions and sleep quality among post graduate students. The other interests of the study were to find out the influence of gender on internet addiction and sleep quality. Thus, the study on internet addiction and sleep quality among post graduate students is very relevant and important.

METHODOLOGY

Statement of the problem

To study internet addiction and sleep quality among post graduate students.

Objectives

The aim of the research is to study internet addiction and sleep quality among post graduate students.

1. To find out the level of internet addiction and sleep quality among post graduate students.
2. To find the relationship between internet addiction and sleep quality.
3. To find the influence of gender on internet addiction and sleep quality.

Hypotheses

H₀1. There is no significant relation between Internet addiction and sleep quality among post graduate students.

H₀2. There is no significant difference in internet addiction among males and females.

H₀3. There is no significant difference in sleep quality among males and females.

Sample

In this study the sample was chosen from a population of Post Graduate Students. Purposive sampling technique was used. In the research purposive sampling technique was used due to lack of time, economical constrains. The study consists of 261 post graduate students. Questionnaire was circulated through Google forms.

Instruments

Socio-demographic data sheet:

This tool is developed by the researcher to elicit the demographic information of the subjects employed in the study, which included age, gender and so on.

Internet Addiction and Sleep Quality among Post Graduate Students

Internet addiction test - IAT 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.

Pittsburgh Sleep Quality Index (PSQI):

The Pittsburgh Sleep Quality Index (Buysse, Reynolds, Monk, and Berman PSQI-1989) was used to assess the extent of sleep quality among the sample selected. This scale contains 18-items self-reporting the respondents. The items measure seven components sleep quality, score ranging from from 0 (no difficulty) to 3 (severe difficulty) for sleep duration, sleep disturbance, sleep latency, daytime disturbance, habitual sleep efficiency, sleep quality, and use of sleep medications. The total of these provides an index referred to as global sleep quality which ranges from 0 to 21. A score of 5 or < indicates poor sleep quality. Reliability measures indicate that the PSQI generally has high internal consistency ($\alpha = .80$ to $.85$) and test-retest reliability ($r = .85$ to $.87$). It also has acceptable concurrent validity; scores on the PSQI are highly correlated with scores on other subjective measures of sleep quality ($r > .69$) too.

Procedure of the study

In this pandemic situation as it was not safe to visit post graduate students who participated in the research, the researcher used google forms to collect the data from 261 post graduate students from different parts of Kerala. Before administrating the questionnaire, consent was of the participant was taken and with their willingness study was conducted. They were assured of confidentiality. They were asked to answer all the questions. The instructions were given at the beginning of the google form before starting the questionnaire. Once the data were collected, the response were successfully saved which was later used for scoring.

Ethical Consideration

- The consent was taken from each student.
- Participants had voluntarily participated in the study.
- Participants were given full freedom to quit at any point of the study if they felt uncomfortable.
- Adequate level of confidentiality of the data collected was assured to the participant.

Statistical techniques

The data collected was entered into the excel sheet. For further analysis of result the data was categorized and then the application Statistical package for the Social Science (SPSS) was used. The data entered in the excel sheet was analyzed in the SPSS table. The normality was checked. In the present study descriptive, and inferential statistics were employed for data analysis.

Internet Addiction and Sleep Quality among Post Graduate Students

Descriptive statistics: Frequency, percent, mean and standard deviation

Inferential statistics: As data was not normally distributed non-parametric tests were used. Spearman correlation and Mann-Whitney U test were the test used in this research.

RESULTS

The collected data was coded and analysed using SPSS

Table 1: Showing the relationship between Internet Addiction and Sleep Quality among post graduate students.

	N	P	p
Internet addiction and sleep quality	261	.114	.066

Summary of Spearman correlational test presented in the table 4.2 indicate that scores of internet addiction and sleep quality among post graduate students. The correlation coefficient and the significant value are 0.114 and 0.066 thus $p > .05$, here the null hypothesis is being accepted and there is no significant difference in internet addiction and sleep quality among post-graduation students. There was a total of 261 sample of post graduate students. The spearman correlational value is 0.114 which shows a positive less correlation. Here it is evident that there is no much of significant relation between the variables and we are able to found less amount of positive correlation too.

Table :2 Comparing Internet Addiction among males and females

	N	Mean Rank	U	Sig
Males	78	136.62	6698.500	.432
Females	183	128.60		

Dependent variable: Internet Addiction

Summary of Mann-Whitney U test presented in the table 4.3 indicates that the scores of Internet addiction among males and females. The U and the significant value are 6698.500 and 0.432 thus $p > 0.05$, here the null hypothesis is being accepted and there is no significant difference in internet addiction among males and females. The mean rank of internet addiction among males and females was found to be 136.62 and 128.60 respectively. There was a total of 261 sample of post graduate students. Here even though we accept the null hypotheses, while considering the mean value it is evident that the mean ranks of males is higher than that of females. So, we can interpret as males tend to have higher internet addiction than females.

Table :3 Comparing Sleep Quality among males and females.

	N	Mean Rank	U	Sig
Males	78	140.79	673.500	.168
Females	183	126.83		

Dependent variable: Sleep Quality Summary of Mann-Whitney U test presented in the table 4.4 indicates that the scores of Sleep Quality among males and females. The U and the significant value are 6373.500 and .168 thus $p > 0.05$, here the null hypothesis is being accepted and there is no significant difference in sleep quality among males and females. The mean rank of sleep quality among males and females was found to be 140.79 and 126.83 respectively. There was a total of 261 sample of post graduate students. Here even though we

Internet Addiction and Sleep Quality among Post Graduate Students

accept the null hypotheses, while considering the mean value it is evident that the mean ranks of males is higher than that of females. So, we can interpret as males tend to have higher sleep quality than females.

DISCUSSION

The overall purpose of this study was to assess the relationship between Internet Addiction and Sleep Quality among Post Graduate students and to understand how both variables have an impact over each other. The study found that there is no significant relation between the two variables Internet Addiction and Sleep Quality among post graduate students, the null hypothesis there is no significant difference in internet addiction and sleep quality among post graduate students was accepted.

There is no significant difference in internet addiction among post graduate students with respect to their gender, as males and females show no significant difference in the variable internet addiction. It was clear from the results that males have high level of internet addiction but the difference was not significant. So, the results proved that the null hypothesis internet addiction has no significant difference in internet addiction among males and females was accepted.

The study also found that there is no significant difference in sleep quality among males and females which suggests that both males and females have similar levels of sleep quality. From the results it was clear that males have slightly high level of sleep quality than females however this does not certainly prove that males have a significant difference in the levels of sleep quality when compared to females. This clearly indicate that the null hypothesis there is no significant difference in sleep quality among males and females was accepted.

SUMMARY AND CONCLUSION

Summary

The aim of the research is to study Internet Addiction and Sleep Quality among Post Graduate students. The research question was is there any significant relation between internet addiction and sleep quality among post graduate students? The study measures internet addiction and sleep quality among post graduate students. A total 261 samples were collected 183 females and 78 males. The consent from each participant was taken. The data collected was scored according to manual and was analyzed using Statistical Package for the Social Science (SPSS). Firstly, the normality was checked and identified the data was not normal and used the non-parametric test i.e., spearman correlation and Mann-Whitney U test.

Conclusion

Since the major purpose of this study was to examine relationship between sleep quality and internet addiction, how one's addiction towards internet affects their sleep quality levels. Depending on the findings of the study, the following concluding notes were made:

- There was no significant relationship between internet addiction and sleep quality.
- There is no significant difference in internet addiction among males and females. The mean rank shows males tend to have higher internet addiction than females.
- There is no significant difference in sleep quality among males and females. The mean rank shows males tend to have higher sleep quality than females.

Implications of the Study

From the present study we can find out that there is influence of internet addiction and sleep quality among gender. In males both the internet addiction and sleep quality show a higher of mean rank. In future more kind of learning practices can be introduced so that the internet addiction can be decreased and sleep quality can be increased and it helps to decrease physiological, psychological, emotional and social problems. If people are involved in various activities, they can reduce internet addiction. Internet addiction and low sleep quality can lead to severe health problems.

Limitations of the study

- As the sample was taken from a particular state, Kerala it cannot be generalized to the whole population.
- The study was only based on post graduate students therefore internet addiction and sleep quality among other individuals in other stages of life cannot be taken into consideration.
- Participants had to fill the questionnaire online. This also could have affected the concentration of the participants resulting in inaccurate responses.
- The sample chosen was very small and there can be occurrence of sample fluctuations.

Suggestions for future studies

- In future this study can be implemented in a large population.
- Also, we can conduct a pre-test and post-test to students after giving some training program to post graduate students for decrease their internet addiction and to increase sleep quality.
- We can try extending the study to post graduate students of various states of our country.

REFERENCES

- Allison G. Harvey, Kathleen Stinson, Katriina L. Whitaker, Damian Moskowitz, & Harvinder Virk (2008). The Subjective Meaning of Sleep Quality: A Comparison of Individuals with and without Insomnia. *Sleep*. 31(3), 383–393.
- Beard, K. (2002). Internet addiction: current status and implications for employees. *Journal of Employment Counseling*, 39(1), 2-10.
- Bhandari, P.M., Neupane, D., Rijal, S., Thapa, K,m Mishra, S.R., & Poudyal, A.K. (2017). Sleep quality, internet addiction, and depressive symptoms among undergraduate students in Nepal. *BMC Psychiatry*, 1: 106. doi: 10.1186/s12888-017-1275-5
- Cain, N. and Gradisar, M. (2010). Electronic media use and sleep in school-aged children and adolescents: a review. *Sleep Med.*, 11: 735–742.
- Caplan, S.E. (2002). Problematic Internet use and psychosocial well-being: Development of a theorybased cognitive-behavioral measurement instrument. *Comput Human Behav*, 17, 553-575.
- Chen, S.-H., Weng, L., Su, Y., Wu, H. and Yang, P. (2003). Development of a Chinese Internet addiction scale and its psychometric study. *Chin. J. Psychol.*, 45: 279.
- Chen, YI-Lung, Gau, & Susan Shur-Fen (2016). Sleep problems and internet addiction among children and adolescents: a longitudinal study, *Journal of Sleep Research*, 25 (4), 1365-2869

Internet Addiction and Sleep Quality among Post Graduate Students

- Chuang, Y.-C. (2006). Massively multiplayer online role-playing game-induced seizures: a neglected health problem in internet addiction. *Cyberpsychol. Behav.*, 9: 451–456.
- Davis, R. A. (2001) A cognitive–behavioral model of pathological internet use. *Computers in Human Behavior*, 17, 187–195.
- Duffy, J. F. & Czeisler, C. A. (2009). Effect of light on human circadian physiology. *Sleep Med. Clin.*, 4: 165–177.
- Fineberg N.A, Haddad P.M, Carpenter L, Gannon B, Sharpe R, Young A.H, Joyce E, Rowe J, Wellsted D, Nutt D.J, & Sahakian B.J. (2013). The size, burden and cost of disorders of the brain in the UK. *J Psychopharmacol.*,27(9):761-70.
- Gau, S.S. (2006). Prevalence of sleep problems and their association with inattention/hyperactivity among children aged 6-15 in Taiwan. *J Sleep Res.* 15 (4), 403-414.
- Goodman, A. (1990). Addiction: definition and implications. *British Journal of Addiction*, 85(11), 1403-1408.
- Higuchi, S., Motohashi, Y., Liu, Y. & Maeda, A (2005). Effects of playing a computer game using a bright display on presleep physiological variables, sleep latency, slow wave sleep and REM sleep. *J. Sleep Res.*,14: 267–273.
- Hur, M. (2006). Demographic, habitual, and socioeconomic determinants of Internet addiction disorder: An empirical study of Korean teenagers. *Cyberpsychol Behav*, 9,514- 525.

Acknowledgement

The author thanks everyone who took part in this study and assisted to make it possible.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Thomas A C & Vignaanth Babu K G (2021). Internet Addiction and Sleep Quality Among Post Graduate Students. *International Journal of Indian Psychology*, 9(2), 1735-1741. DIP:18.01.172.20210902, DOI:10.25215/0902.172