



Technology Addiction: A predictive role For Fatigue

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Abstract

BACKGROUND: Technology addiction has become a major health concern worldwide, affecting all age groups.

OBJECTIVES: The objective of this study was to determine the predictive role of internet addiction in relation to fatigue among college-going students.

METHODS: The sample for this study comprised of 100 college students from Delhi-NCR. The Young's Internet Addiction Test (YIAT), originally developed by Young in 1998, and The Piper Fatigue Scale, developed by Piper et al. in 1998, was used as assessment tools.

RESULTS: The finding divulged the significant positive relationship between internet addiction (IA) and fatigue among college students. Additionally, internet addiction was found to contribute 9.1% of the variance in the students' experience of fatigue.

CONCLUSION: To conclude internet or technology addiction plays a prominent role in the experience of fatigue among college students.

Keywords: Technology Addiction, Fatigue

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Introduction

Modern world is characterized by increasing connectivity and technology use. However, some teens and young adults cross from normal use into a realm in which their technology use is having a negative impact on school, work, family, and social life. Technology addiction has been given major health concern across all age group, worldwide. Addiction development has been further reported into three phases associated with nominal, compulsive, and addicted use (Vaghefi, Negoita, & Lapointe, 2023).

Technology addiction in the broad term is defined as the uncontrollable urge to use technological devices such as Computers, Smartphone or Gaming Systems. Technology addiction falls into a category of addiction termed behavioral addictions. Behavioral addictions are widely recognized by mental health and addiction professionals and include other behaviors such as gambling and sex. A behavioural addiction is further characterized by a progressive inability to control, regulate, or limit the behaviour.

Technology addiction interferes with person's work, family or social life. On a neurological level, technology addiction operates similarly to chemical addictions, in that expectation followed by rewards leads the brain to release dopamine and other feel-good chemicals. This reward might be winning a level of video game, or getting "likes" on a picture. Over time, a person begins to crave this dopamine release and often requires increasing stimulus to get the same effect (Shabina, Jan, & Alsaedi, 2023).

While chemical addictions often have a magnified effect by blocking the re-uptake of these feel-good chemicals so that they stay in the brain longer and more powerfully, researchers are finding that the inconsistent rewards often associated with behavioral addictions like gambling and video games also increase the flood of dopamine. (i.e., taking a hit of marijuana will consistently yield a "reward" in the brain, while a

person doesn't know when they will beat a video game level or get a "like." This not-knowing increases the intensity of the physiological response to reward.)

Technology Addiction associated with Poor hygiene, Decreasing interest in offline activities, Irritability or frustration, Persistent use in spite of negative consequences at school, work, or in relationships, Preoccupation with online experiences (Nasiri, Gassler, & Teuber, 2023). Technology addiction produces different effects in people's lives, as it causes deterioration not only in health, but also in interpersonal relationships. Some consequences are Sleep impairment (Brito, et al., (2023), Difficulty holding attention and concentrating Distractions (Liu, Hu, and Bi, 2023), Memory difficulties (Murimi, 2023), Difficulties in socializing and communicating (Islam, et al., 2023), and Mental Health Issues (Oliveira, et al., 2022). In some cases, nomophobia (Berdida, & Grande, 2023) too.

More research needs to be done on the long-term effect of technology addiction on adolescents' development. Since, habits in adolescence actually change their brains (Zuhri, 2023), raise to enhance insight on technological addiction and its associated factors or impact. In aforesaid context, the present study was aimed to predictive role of internet addiction for fatigue among college going students

Objectives

- To study the relationship between the internet addiction and fatigue among college going students.
- To determine the predictive role of internet addiction for fatigue among college going students.

Research Method

SAMPLE: The sample of the present study comprised of 100 college students from Delhi-NCR. These students were selected on the basis of purposive sampling. At first the sample was divided equally into two equal groups I.e., 50 males and 50 Females.

Table1 : Sample Profile by using Descriptive statistics

Variables		Frequency (N)	Percentage(%)
Residence	Rural	<u>20</u>	20.00
	Urban	<u>50</u>	50.00
	Sub-Urban	<u>30</u>	30.00
Parents	Single	<u>22</u>	22.00
	Both	<u>45</u>	45.00
	None	<u>33</u>	33.00
Socio-economic Status	Upper-middle Class	<u>30</u>	30.00
	Middle Class	48	48.00
	Lower Middle Class	22	22.00

Inclusion Criteria:

- ✓ Adolescents with between the age of 15 years to 17 years.
- ✓ Adolescent indulging in various activities on Internet for at least last 6 months.
- ✓ Apparently healthy students, who had given verbal informed consent

Exclusion Criteria:

- ✓ Refused to involve in the study.
- ✓ Students under medication for any psychiatric illness, absent during the study period, incompletely filled questionnaire, lack of interest, and not willing to give verbal informed consent.

RESEARCH DESIGN : Correlation Research Design**MAIN OUTCOME MEASURES**

- **Socio-demographic data sheet:** A semi-structured socio-demographic data sheet was designed specifically for the present study. It included details like name, age, sex, education, socio-economic status, parents, and residence.
- **Young's Internet Addiction Test (YIAT);** to assess the internet addiction, Young's Internet Addiction Test (YIAT) was used. YIAT is originally developed by Young in 1998. This test comprises of 20 statements based on

diagnostic criteria of pathological gambling described in DSM-IV-TR (American Psychiatric Association, 2000). Psychometric properties include internal consistency and concurrent validity of YIAT-20 is analyzed satisfactory (Widyanto, and Mcmurran, 2004).

- **The Piper Fatigue Scale:** The Piper Fatigue Scale Survey is routinely used by medical researchers to scientifically measure fatigue levels in patients during clinical studies. The 22 question Piper fatigue Scale Survey takes less than 2 minutes to complete and it will enable you to quickly and accurately assess your current level of fatigue.

Research Procedure

In the present study, 100 college going students were selected on the basis of purposive sampling method. At first sample was divided into two groups I.e., boys and girls. After that, informed consent was taken from each participant. After taking informed consent, instructions were given to all participants. After that, all the participants were assessed by using social demographic data, the Internet Addiction scale and Piper Fatigue Scale. Obtained data was analysed under both descriptive and inferential statistical analysis(Correlation Coefficient and Linear Regression analysis) with the help of Statistical Package for Social Sciences (SPSS) by using version 18.0 (Windows, 2010). The computed p values were less than 0.05 and 0.01 respective to each analysis was determined to be statistically significant.

Result & Discussion

*E*xcessive social media consumption leads to addiction and affects mental health. It is a phenomenon that is difficult to avoid. Previous research on the effects of excessive Internet use shows that people who engage in social media (SM) without restraint experience over-involvement, over-disclosure, techno stress, and social media fatigue (SMF). SMF, conceptualized as an emotional and cognitive feeling of being overwhelmed, manifests itself in mindless browsing of content, limiting the amount of time spent on SM, or quitting SM altogether. Self-control, although present in the technology addiction literature and psychology research, has been rarely described in relation to both excessive SM use and SMF (Świątek, et al., 2023).

Therefore, the main goal of the present study was to study the effect of technology addiction, fatigue on college students

In the present study, the variables in the analysis dataset included Internet Addiction and Fatigue. The obtained data for these studied variables was dealt in both descriptive and inferential analysis by employing SPSS (Version 18). The present study was aimed to study the relationship and predictive role of internet addiction for fatigue among college going students. The results are described below under following heads-

DESCRIPTIVE ANALYSIS

Descriptive Analysis revealed data attributes such as mean, range, etc. on measure of Fatigue and Internet Addiction Scores for the sample (N=100).

Result Table 1: Summary of Descriptive Analysis of the Variables for the sample (N=100)

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
Fatigue	100	34.00	198.00	89.10	26.15243	.643	1.803
IAS	100	15.00	99.00	58.99	21.42711	-.306	-.640
Valid N (listwise)	100						

Result Table 1 revealed the Descriptive Analysis for studied attributes for college going students namely Fatigue and Internet Addiction Score of sample (N=100).

While considering Fatigue (M= 89.1, SD=26.15), descriptive findings disclosed the incidence of Fatigue for the college going students sample as average and Internet Addiction Score (M=58.99, SD=21.42) the descriptive values highlighted that whether considered Internet Addiction Score and Fatigue as a whole the scores fall into a moderate category which indicates their level as an average.

To condense the descriptive analysis highlighted that, Internet Addiction Score and Fatigue are average enough for whole sample (N=200). .

Correlation Analysis

Result Table 2: Summary of Correlation (Pearson) Analysis for Internet Addiction and Fatigue.

Correlation Analysis for Fatigue and Internet Addiction			
		Fatigue	IAS
Fatigue	Pearson's r	1	.302**
IAS	Pearson's r	.302**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Result Table 4.5 displays the correlation coefficient of Fatigue with the Internet Addiction. The result revealed the relationship between these aforesaid constructs as mild in strength and in positive in direction ($r = .302$, $p < .01$). Moreover, the significant correlation coefficients stipulate the incidence of higher level of fatigue that in turn is conversely associated with higher level of Internet Addiction. **Hence, the Hypothesis 1 has been proven.**

In line to the present finding, Young & Rogers (2009), study reported that the users were internet addicted resulting in psychological problems and issues and their treatments were also discussed in their study. Likewise Sharma et al. (2014) study shows that the males were internet addicted but here, in this study female are more addicted and have less fatigue compared to males. Weiser (2004), study shows that male uses the internet for entertainment and leisure activities but females use it for interpersonal communication and education. This reason can also be identified as females been more internet addicted.

Through this study, we can prove that Females are more addicted as compared to Males, but Males have more fatigue than females. The correlation between the two shows that relation is positive and higher the level of internet addiction, the higher the level of Fatigue can be found.

Regression Analysis

Result Table 3: Summary of Regression Model

Model	R	R ²	Ad R ²	SE Estimate	R ² Change	Change Statistics			
						F Change	df 1	df 2	p F Change
1	.302 ^a	.091	.082	25.05487	.091	9.864	1	98	.002

a. Predictors: (Constant), IAS

Summary of regression model apparent in above result table 3 analyzed the IA as a predictor of Fatigue for college going students. As apparent in this emerged regression model computed r value ($r = 0.302$) revealed correlation strength between these two constructs is mild in strength. Further R square ($R^2 = .091$) revealed that college students' IA contributes 9.1 % of variance in their experience of fatigue,

Result Table 4: Summary of ANOVA Correspond to Regression Model

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6191.838	1	6191.838	9.864	.002 ^a
	Residual	61519.162	98	627.747		
	Total	67711.000	99			

a. Predictors: (Constant), IAS

b. Dependent Variable: Fatigue

Summary of significance of regression model apparent in above result table 4 analysed as statistically significant ($F = 9.864$) at 0.01 level, which revealed that the IA as a predictor of Fatigue for college going students is significant.

Result Table 5: Summary of Regression Coefficients

Coefficients ^a						
Model		Unstandardized		Standardized	t	p
		Coefficients		Coefficient		
		B	S E	Beta		
1	(Constant)	67.328	7.371		9.134	.000
	IAS	.369	.118	.302	3.141	.002

a. Dependent Variable: Fatigue

Result Table 5 presents the summary of regression coefficient i.e. t value (3.141) corresponding to beta value ($B = .369$) was found to be significant it revealed that .36 unit increases in score of IA can be predicted for every single unit increase in score of Fatigue from this regression model. Further β value presents standardized regression weight for IA is found as .30. Hence, the Hypothesis 2 has been proven.

The previous literature found to be in consistent with the present finding. Such as according to Hayyat, (2023), Mobile phones have become an essential part of life and have replaced the old wired and fixed telephones. They have become a means of survival nowadays and influenced the minds of people, especially the youth, to such a limit that they might prefer having their telephones with them to the daily essentials. Youngsters are constantly scrolling, texting, calling, playing games, or just loitering around with it. It has become a saviour for introverts nowadays, who can ignore the crowd using their mobile phones. However, we should not restrict ourselves to saying that it has become integral. Instead, it has corrupted people so much that they are struck with bouts of monomania without mobile phones. In same line, Świątek, et al., (2023) verified whether there is a direct relationship between problematic smartphone use and Social Media Fatigue Scale (SMF), and whether this association is mediated by self-control. The outcomes indicated that there are significant interrelationships between the three studied variables. The association between problematic smartphone use and SMF is mediated by self-control. To conclude A lack of impulse-inhibition skills, such as compulsive checking of notifications, can be a significant factor in SM exhaustion, fatigue, or frustration. SMF can also be understood as a natural defensive response, triggered in situations where individuals are overwhelmed, when the self-control is insufficient to stop the compulsion to use SM, and the use of a smartphone for this purpose is excessively engaging. To conclude, internet addiction is significant predictor of fatigue among college going students. The limitation of the present study can be traced as external generalization of the present finding which is limited to Delhi (NCR) resion.

Conclusion: The study revealed that there is significant relationship between these aforesaid constructs as mild in strength and in positive in direction. Additionally, Internet addiction significantly contributes 9.1 % of variance in their experience of fatigue.

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Conflict of interest: The Authors declare that there is no conflict of interest.

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