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Correlation between the Internet addiction and affect score among medical students

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ABSTRACT

Background: The Internet has become an integral part of our day-to-day life. It is one of the most influential media in the modern era and incorrect usage might be harmful. About 90% of adolescents use it for acquiring information. Its development has given lots of chance for exchange of information, communication, and social interactions. One of the major public health concerns accompanied with it is the internet addiction. **Aims and Objectives:** The objective of the study was to assess and to correlate the affect scores and Internet addiction test (IAT) score among medical college students using the positive and negative affect (NA) schedule scale and Young's IAT. **Materials and Methods:** This cross-sectional study was conducted among the 1st-year and 2nd-year medical students to assess the Internet addiction and positive and NA score. They were asked to fill separate questionnaires. **Results:** The result showed that the duration spent in viewing the Internet and IAT score had a significant negative correlation with the positive affect score ($P = 0.001$) and significant positive correlation with NA score ($P \leq 0.001$). **Conclusion:** Intervention measures should be taken to minimize the effects of internet addiction on affect score. Awareness about harmful effects of excess Internet use should be provided so as to enhance the academic performance of students.

Key words: Internet addiction; Affect score; Medical students

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INTRODUCTION

The Internet has become an integral part of our day-to-day life. The Internet is one of the most influential media in the modern era and about 90% of adolescents use it for acquiring information. Its development has given lots of chance for the exchange of information, communication, and social interactions. One of the major public health concerns accompanied with it is the Internet addiction. It is described with different expressions such as problematic internet use, Internet dependence, inevitable internet use, and compulsive internet use.[1]

Epidemiological studies have shown the association between the Internet addiction and affective disorders.[2] "Affect" is referred as feelings that can be experienced to a particular situation or stimulus. These feelings are considered adaptive tendencies, which results because of situations that have evolutionary significance. Thus, affect is associated in concepts relevant to substance use, which includes the positive and negative affect (NA), regulation of cognition, and behavioral motivation.[2] According to Merz et al., the two domains of the affect, the positive and NA schedule (PANAS) have been used to assess emotional experience or mood.[3]

Positive affect is described as the extent to which an individual feels alert, active, and excited. High levels of PA show a state of high energy, full concentration, and pleasurable engagement and low PA levels indicate sadness and lethargy. Whereas NA is defined as subjective distress, including mood fluctuations such as anger, fear, guilt, and disgust. High levels of NA indicate significant distress, whereas low levels of NA shows state of calmness.[4,5]

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Furthermore, affect balance indicates a state of equilibrium between positive and negative feelings that can be experienced by a person.[5]

Aims and objectives

To assess and to correlate the affect scores and the Internet addiction test (IAT) score among medical college students using the PANAS scale and Young's IAT.

MATERIALS AND METHODS

The study commenced after obtaining approval from the Institutional Ethics committee dated January 19, 2028. The present study was a cross-sectional study conducted among the 1st-year and 2nd-year medical students with the age group of 17–22 years, who were volunteered and ready to give written informed consent. 150 participants were recruited by random sampling. After obtaining informed consent, the information of individual's identity, medical and family history was collected. Furthermore, the students were asked to fill the questionnaires and the descriptions of which is given below.

Young's IAT consisting of 20-item scale, which measures mild, moderate, and severe levels of the Internet addiction. The score for each question ranged from 0 to 5, as 0 – does not apply, 1 – rarely, 2 – occasionally, 3 – frequently, 4 – often, and 5 – always. Finally, IAT score was obtained by adding scores of all 20 questions.[1]

PANAS is designed to assess individual's positive and negative moods, consisting of 20 words. This questionnaire explains different emotions and feelings. Each question has a grade from 0 to 5. Finally, scores will be added up separately for positive and NA. Total score can range from 10 to 50 for both positive and NA. The highest score of each affect indicates higher degree of that affect.[6]

Statistical analysis

Statistical analyses were performed using SAS 9.2 version software. Values were expressed as mean and standard deviation for the continuous variables. Correlations between the variables were investigated by the Pearson's correlation coefficient. Statistical significance was considered if the $P<0.05$.

RESULTS

In the present study, mean IAT score, positive and NA score of all the participants were shown in Table 1. Mean of IAT score was found to be 49.76, positive affect score was 29.38, and NA score was found to be 25.78. The Pearson's correlation of the same was depicted in Table 2. The result showed that the duration spent in viewing internet and IAT score had a significant negative correlation with positive affect score ($r=-0.26$, $P=0.001$) and significant positive correlation with NA score ($r=0.32$, $P\leq0.001$).

Table 1: Internet addiction test score, positive and negative affect score of study population (n=150)

Parameter	Mean	SD
Internet addiction test score	49.76	13.92
Positive affect score	29.38	6.67
Negative affect score	25.78	7.10

SD: Standard deviation

Table 2: Correlation of internet addiction test score with positive and negative affect score (n=150)

Parameter	Positive affect score	Negative affect score
Years of internet use		
R	0.06	−0.04
P	0.44	0.60
Hours of internet use per day		
R	−0.18	0.16
P	0.02*	0.04*
IAT score		
R	−0.26	0.32
P	0.001*	<0.001*

IAT: Internet addiction test

Of the 150 participants, 77 subjects were addictive (IAT score ≥50) and 73 were non – addictive (IAT score <50) Internet users (Table 3) and the addictive had higher NA ($P=0.0004$) than the non-addictive when compared (Table 3).

DISCUSSION

The study was designed to understand the implication of usage of the Internet in causing health hazards among the teenagers. The present study correlated Internet addiction with positive and NA score (Table 2). The Internet addiction score was measured by the duration of Internet browsing of an individual. The positive affect was described as the extent to which an individual feels alert, active, and excited and the NA was defined as subjective distress, including mood fluctuations such as anger, fear, guilt, and disgust. The result of the study showed a significant negative correlation with the positive affect and positive correlation with the NA, i.e., as the duration of time spent in a day for the Internet browsing increases the Internet addiction score also increases; increase in addiction score decrease positive

Table 3: Comparison of mean negative affect scores between addictive (n=77) and nonaddictive (n=73) internet users

Internet user group	Negative affect score (mean)	SD
Addictive internet users (IAT score ≥50)	27.75	6.78
Nonaddictive internet users (IAT score <50)	23.71	6.87

*Statistically significant, SD: Standard deviation, IAT: Internet addiction test

affect and vice versa. Whereas increased addiction score increases NA and decreased addiction score decrease NA. The result of the present study was consistent with previous studies that were reported significant positive correlation between the Internet addiction score and NA.[2,7,8]

High levels of PA show a state of high energy, full concentration, and pleasurable engagement and low PA levels indicate sadness and lethargy. Whereas high levels of NA indicate significant distress, whereas low levels of NA show a state of calmness.[4,5] Increased NA score reflects low self-esteem. Self-esteem in the determining years is vital to the personality growth. The absence of parental support, results in feelings of insufficiency and worthlessness, can be the cause for low self-esteem and it predicts problematic internet. On the contrary, plenty of research from psychology has shown that high self-esteem was showing significant negative correlation with the Internet addiction.[9] Individuals may find Internet as an alternative to escape from their negative emotions, in which they are not challenged or threatened.[2] Furthermore, affect balance indicates a state of equilibrium between positive and negative feelings that can be experienced by a person.[5]

When the mean NA score was compared with the addictive and non–addictive internet users (Table 3), the result showed that average NA score was significantly high in addictive when compared with that of non-addictive Internet users. A recent study had reported that those who are using the Internet for more than 38 h/week will have problems such as extreme tiredness and lack of sleep[10] which was supporting earlier work which reported that the excess use of the Internet can be problematic, as some of them conforming to internet addiction symptoms, compulsive behavior.[11]

Since, severe Internet addiction might have an adverse effect, intervention measures should be taken to minimize the effects of Internet addiction on affect score. Awareness about harmful effects of excess Internet use should be provided so as to enhance the academic performance of students and also the importance of healthy and safe use of Internet has to be spread among public.

Limitations of the study

Couldn't do with larger sample size.

CONCLUSION

Awareness about safe use of Internet can be given to public for the better health.

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BN- Design of the study, review of literature, analysis and preparing the manuscript; **KV-** Data collection, preparing the manuscript; **SSKG-** Analysis and preparing the manuscript.

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