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INTERNET ADDICTION AND EMOTIONAL BEHAVIORAL PROBLEMS AMONG ADOLESCENTS

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ABSTRACT
The present study aimed to find the relationship between internet addiction and emotional-behavioral problems among adolescents through a cross-sectional survey research design. A sample of 1000 students from Gujrat and Lalamusa, Pakistan, were chosen using a multistage stratified sampling technique. Data were gathered by using the Internet Addiction Test (IAT) and the Emotional and Behavioral Problem Scale (EBPS). The findings disclosed that there is a significant correlation between internet addiction and emotional-behavioral problems among adolescents (r=.81, p=.01). Results show boys were more addicted to the internet than girls, hence the former experience more emotional-behavioral problems than the later ones. Moreover, adolescents studying in private institutes and using the internet for entertainment purposes were also more addicted to the internet and had higher levels of emotional-behavioral problems than the others. The results exhibited that internet addiction significantly predicted emotional-behavioral problems among adolescents [R 2 =.68; F (1, 998) = 2150.22, p=.01]. The outcome of the study highlighted the negative effects of excessive internet usage and concluded that internet addiction can trigger emotional and behavioral problems among adolescents. Hence, unhealthy use of the internet interferes with the healthy emotional and behavioral functioning of adolescents.
Keywords: Internet Addiction; emotional-behavioral problems; adolescents; gender; social media

INTRODUCTION

The internet was developed in the 1970s and has swiftly improved and evolved to become a significant part of daily life for people of all ages and genders (Chou et al.,2015). The number of people using the internet worldwide is rapidly increasing; according to the most recent data, more than 4 billion people use the internet globally. As a result, more than half of the world's population now has access to the internet, with a quarter of a billion additional users added for the first time in 2017 (Simcharoen, et al.,2018). Although technology provides immense convenience in many areas, it may also attract people to engage in problematic usage and addiction. Internet addiction has elevated significant global health concerns in recent years (WHO, 2015). The research found that 34% of Pakistani teenagers had severe internet addiction (Siddiqui, Kazmi & Siddiqui, 2021).

Adolescence is a substantial and relatively difficult stage of development, depicted by extreme emotional responses, increased risk-taking, and impulsive behaviors alongside neurobiological circuits that play an impact on emotional and behavioral regulation (Kemp et al., 2019; Ahmed, Bittencourt-Hewitt, Sebastian, 2015; Steinberg, 2008). With its huge amount of information and unique content, the internet may be especially attractive during the teenage, a delicate period in which self-control has not yet completely developed. Addiction to the internet appears to be a significant contributor to adolescents' emotional and behavioral issues (Tsitsika et al., 2014). Internet addiction is a behavioral

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and technological addiction that resembles a gambling addiction. Internet addicts believe they are obligated to use the internet and as a result, ignore their family, friends, and company (Young,2004). Adolescent and teen internet addiction is a huge health concern and it is caused by what they view on the internet. Everyone today has access to the internet via smartphones, tablets, and personal computers, allowing them to engage in a variety of professional and recreational activities no matter when or where they are (Heo et al., 2014). But the overuse of the internet makes them isolated from immediate family and social circles. Social connections in social groups make them aware of healthy interaction patterns and become a source of social support. When they become over-involved in internet use and online activities; they become isolated and hence can experience different types of emotional and behavioral problems (Park, Kim & Lee, 2014). According to Oliva, Antoln-Suárez, and Rodrguez-Meirinhos (2019), many online activities harm adolescents by leading to social issues and dysfunctional family relationships. Additionally, it causes mental health issues, especially for those who have internet addiction (Lam, 2014).

Behavioral and emotional problems have recently emerged as serious mental health issues among teenagers, with the fact of 10–20 % of adolescents globally suffering from psychological illnesses (World Health Organization, 2019). Behavioral emotional difficulties can appear at a very early stage, with an increased tendency beginning at age 5 and a substantial increase throughout puberty (Patalay & Fitzsimons, 2017). Behavioral emotional problems have been associated with depression (McCann et al., 2014), self-harm, drug abuse (Wilens et al., 2013), and suicidal thoughts (Guo et al., 2019). Adolescents who had the habit of compulsive internet use were at an alarming condition of developing emotional-behavioral problems as compared to adolescents with the normal use of the internet (Lebni et al., 2020). Some studies reported a greater prevalence of mood and anxiety problems (Elhai, Dvorak, Levine & Hall, 2017) discomfort (Lee, Kyung, Lee, Moon, & Park, 2016), muscle tiredness (Samaha & Hawi, 2016), and disturbed sleep quality (Schweizer, Berchtold, Barrense-Dias, Akre & Suris, 2017).

A few studies done in Pakistan have shown that inappropriate internet use has an impact on several aspects of life among undergraduates, including education, health, social connections, and psychological well-being (Thakur, Azeem, & Gilani, 2020; Ahsan, Rasheed, & Zonash, 2019; Khan & Muqtadir, 2016; Suhail & Bargees, 2006). According to the knowledge of the researcher, no study has been documented in Pakistan regarding internet addiction and emotional and behavioral problems among adolescents particularly in the city Gujrat and Lalamusa. The current study aims to fill a gap in the literature about the effects of internet addiction on emotional behavioral problems among teenagers in Pakistan.

Objectives

a) To study the relationship between internet addiction and emotional behavioral problems among adolescents
b) To determine differences in the level of internet addiction and emotional behavioral problems in relation to demographic variables among adolescents

REVIEW OF LITERATURE

Different research has been conducted in different parts of the world that reported internet addiction and emotional behavioral problems among adolescents. Wang et al. (2021) conducted a study on the problematic use of the internet and emotional problems among teenagers in China. The study's findings demonstrated a considerable positive association between problematic internet use and emotional behavioral issues in teenagers. Results revealed that adolescents that have a habit of compulsive internet use were at an alarming condition of developing emotional behavioral problems as compared to adolescents with the normal use of the internet.

In 2021, Raina and Bhatt examine the influence of internet addiction on the mental health of adolescents. They showed that internet addiction had a considerable positive relationship with emotional and behavioral issues. It was also indicated that boys had significantly higher levels of Internet Addiction and behavioral problems as compared to girls.

Siddiqui, Kazmi, and Siddiqui (2021) investigate the link between internet addiction and internet violence and aggression in 513 Pakistani preteens and teenagers (173 boys and 338 girls) selected randomly. The findings showed that 34% of the children were seriously internet addicted. Moreover, it was also revealed internet addiction had a positive correlation with aggression.

Erol and Cirak (2019) conducted a study with the objective of investigating the loneliness and internet addiction levels of college students. According to their findings, there was a substantial correlation between loneliness, Internet addiction, age, and CGPA. Loneliness and CGPA are also major predictors of Internet addiction.

In 2019, Gill find an association between self-esteem and internet addiction among adolescents. The findings showed that the Self-Esteem of adolescents was significantly and negatively correlated with Internet Addiction.

Machado, Bruck, Antoniuk, Cat, Soares, and Silva (2018) evaluated internet addiction and behavioral problems among adolescents from public and private schools in Brazil. A positive correlation between internet addiction and anxiety, depression, rule-breaking, aggressive behavior, and attention problems were found in the study.

Abdullah (2017) conducted research on the relationship between internet addiction and temperament in children aged ranged between 10 to 15 selected from Syria. Internet addiction scale and temperament scale were used for data collection. The findings also demonstrated a substantial positive association between internet addiction, passion, mood, inattentiveness, and physiological sensitivity as well as a significant negative correlation between activity and regularity.

RESEARCH METHODOLOGY

The current study uses a multi-stage stratified sampling technique was used to select a sample from the target population. The sample of the present study comprised of total 1000 adolescents from school and college. Adolescents, both male, and female, in the age group of 14 to 18 years studying in government and private academic institutes of Lalamusa and Gujrat with internet access were included in the current study. Adolescents with any physical disability, mental illness, and terminal illness were excluded from the study.

The measures of the present research consist of the demographics form, the Emotional and Behavioral Problem Scale (Kausar & Pervaiz, 2021), and the Internet Addiction Scale (Kausar & Khan, 2021). *Demographic form*: The demographic form comprised of the demographic variables including gender, age, grade, birth order, institution type, residential area, family system, education of father, education of mother, monthly income, number of hours spent on the internet, and purpose of internet use. *Emotional and Behavioral Problem Scale (Kausar and Pervaiz, 2021).* The emotional and Behavioral Problem Scale consists of 32 items. The response format is grounded on a five-point Likert Scale (strongly agree =5 to strongly disagree =1). There is no reverse scoring for the items. The score ranges from 32 to 160. Higher scores on EBPS indicate a higher level of emotional and behavioral issues whereas low scores indicate a low level of emotional and behavioral problems in adolescents. Cronbach Alpha reliability of the scale was .92 indicating higher reliability. *Young Internet Addiction Test (YIAT)***.** The Internet Addiction Scale was originally developed by Young (1998) and was translated into Urdu by Kausar and Khan in 2021. The tool had 20 items. It has 5-point Likert scale indicating, 0 = not applicable, 1 = rarely, 2 = occasionally, 3 = frequently, 4 = often and 5 = always. The scale identified the four stages of internet usage ranging from not addicted, mild, moderate, and severe. Participants who scored below 30 were not considered addicted, while those who scored 31-49 were considered mild internet addicted. Persons with scores of 50-79 are considered moderate internet-addicted users while scores above 80 are considered severely addicted internet users. Cronbach's alpha reliability of the original scale was 0.89.

First of all, permission from the higher authorities of schools and colleges was taken. Informed consent was taken from participants and only willing participants were included. Brief instructions to fill out the questionnaires were given to the participants and they were asked if they have any ambiguity. They were instructed to cautiously read the directions of each scale respectively and rate the statements honestly. Then the scales were administered to the participants. The questionnaires were completed in an average of 15-20 minutes by participants. The participants were acknowledged at the end for their collaboration and involvement in the study. The findings were obtained by following statistical analysis.

Ethical Considerations

The ethical standards of informed consent and confidentiality were maintained throughout the research by the researcher. Respondents were also informed about their withdrawal right from the research at any time.

DATA ANALYSIS AND RESULTS

Data were entered into 21 versions of the statistical package for social sciences in order to meet the research objectives and evaluate the research hypotheses. The frequencies and percentages of demographic variables among the participants were assessed using descriptive statistics. To meet the study's objectives and test the hypotheses, inferential statistics such as the independent t-test, correlation, and regression were used.

Table No. 1 Correlation Between Internet Addiction and Emotional-Behavioral Problems(N=1000)

Variables	1	2
IAS	1	
EBPS	.817**	1

Note: ******Correlation is significant at the .01 level (2-tailed), IAT= Internet Addiction,EBP= Emotional and Behavioral Problem

Table 1 indicates a statistically significant positive correlation (.81**, p<.01) between internet addiction and emotional behavioral problems.

Table No. 2 Gender Differences in Mean Scores of Internet Addiction and Emotional Behavioral Problems (N=1000)

	Male (n=500)	Female (n=500)			
Variables	**Mean rank**	**Mean rank**	**Z**	**U**	**p**
IAT	522.53	478.47	-2.444	1139860.50	.01
EBP	522.58	478.42	-2.510	113961.00	.01

Note: IA= Internet Addiction, EBP= Emotional, and Behavioral Problem

Table 2 indicates a comparative analysis among adolescents in relation to their gender. It indicates a score of internet addiction among boys (Mean Rank= 522.53) and girls (Mean Rank= 478.47) conditions, Z= -2.51, p=.01. Similarly, the table indicates a statistically significant difference in the mean scores among boys (Mean Rank= 522.58) and girls (Mean Rank= 478.47) conditions, Z= -2.51, p=.01. Specifically, mean rank suggests that boys had a higher level of internet addiction and emotional behavior problems as compared to girls.

Table No. 3 Difference In Mean Scores of Internet Addiction and Emotional Behaviour Problems on The Basis of Institute Type(N=1000)

	Private (n= 500)	Government (n= 500)			
Variables	**Mean rank**	**Mean rank**	**Z**	**U**	**p**
IA	507.33	493.68	-.757	121587.500	.00
EBP	531.20	469.80	- 3.49	109648.00	.00

Note: IA= Internet Addiction, EBP= Emotional, and Behavioral Problem

Table 3 indicates that Mann-Whitney U-test was conducted to compare levels. There is a significant difference in the scores of internet addiction between private (Mean Rank= 507.33) and government institute (Mean Rank= 493.68) conditions, Z= -.757, p=.44. The findings also indicate a statistically significant difference in the mean scores of emotional-behavioral problems between private (Mean Rank= 531.20) and government institute (Mean Rank= 469.80) conditions, Z= -3.49, p=.00. The

mean ranks of students from private institutes indicated that they had a higher level of emotional-behavioral problems and internet addiction as compared to students of government institutes.

Table No. 4 Difference In Mean Scores of Internet Addiction and Emotional Behavioural Problems on The Basis of Purpose of Internet Usage (N=1000)

	Entertainment (n= 549)	**Communication (n=251)**	**Educational (n=200)**		
Variables	**Mean rank**	**Mean rank**	**Mean rank**	**x^2**	***p***
IAT	524.42	506.05	427.88	16.94	.00
EBPS	507.81	512.99	464.77	4.185	.12

Note. x^2= Chi-square, df = 2, IA= Internet Addiction, EBP= Emotional and Behavioural Problem

Table 4 indicates that the Kruskal Wallis test was conducted to compare the levels among adolescents on the basis of the purpose of internet use. There is a significant difference in the scores of internet addiction among 3 levels of the purpose of internet use, X^2 (2, N=1000) = 16.94, p=.00. However, the table also indicates the statistically non-significant difference in the mean scores of emotional-behavioral problems among three levels on the basis of purpose of use, X^2 (2, N=1000) = 4.18, p=.12. Results indicated that mean ranks for the entertainment purpose were higher as compared to other reasons.#

Table No. 5 Linear Regression for Internet Addiction and Emotional Behavioural Problems Among Adolescents (N=1000)

Predictors	***ß***	***S. E***	***R^2***	***F***	***ΔR^2***	***95%CI***	
						LB	***UB***
Constant	34.190	2.008	.68	2150.22	.68	30.25	38.130
IA	1.177	.025	-	-	-	1.127	1.226

Note: p.<.01, IA=Internet Addiction

The results of linear regression as shown in table 5 indicate that internet addiction is a significant predictor of emotional-behavioral problems among adolescents and explained 68% of the variance [R^2=.68; F (1, 998) = 2150.22, p<.01

DISCUSSION

With the advent of technology, the use of the internet facility has become a need in our daily life. Every age group and gender requires internet access in their daily lives for a variety of reasons. Despite the benefits of using the internet, there are a number of drawbacks too. Young people, particularly students at all levels, are more prone to become addicted to the internet, which has several negative consequences. With these negative consequences in mind, this study was designed to investigate the relationship between internet addiction and emotional-behavioral problems among adolescents. The study indicated a significant positive relationship between internet addiction and emotional-behavioral problems among adolescents. Results are supported by previous findings on the problematic use of the internet and behavioral and emotional problems among adolescents. A study on Chinese adolescents' behavioral and emotional issues as well as problematic internet use was conducted by Wang et al. in 2021. According to the study's findings, adolescent emotional and behavioral problems are strongly positively correlated with excessive internet use. Another study, conducted in 2021 on 513 students in Lucknow, India, by Raina and Bhatt, supports the findings. The findings revealed a significant positive link between internet addiction and anxiety, depression, and a loss of behavioral and emotional control. Previous studies have also shown that boys had a higher level of internet addiction and emotional-behavioral problems than girls (Siddiqui, Kazmi & Siddiqui,2021). The results of the current study also supported the literature that boys had a higher level of internet addiction and emotional problems. It was also shown in the current study that students of private schools and colleges had a higher level of internet addiction and emotional-behavioral problems as compared to students of government institutes. Previously it was reported that students of private universities exhibited a higher level of internet addiction as compared to the students of government universities (Vig & Gill, 2015). Findings also indicated that students used the internet more for entertainment purposes than educational and

communicational purposes. The research conducted on medical students by Upadhayay and Guragain (2017) also provides similar outcomes. Further, findings also indicated that internet addiction is a significant predictor of emotional-behavioral problems among adolescents. Previous investigations also confirmed the predicted role of internet addiction in the emotional-behavioral problems of teenagers. The study by Abdullah (2017) confirmed that internet addiction was a significant predictor of emotional behavioral problems among teenagers. The results are also supported by Gioia, Rega, and Boursier's (2021) study on compulsive use of the internet and affective dysregulation among teenagers.

STRENGTHS AND LIMITATIONS

The study would be helpful to provide awareness about internet-related factors that trigger emotional-behavioral problems among adolescents and will be helpful not only for adolescents but for their parents and teachers to reduce the chances of negative outcomes of internet addiction. Based on the findings, behavioral techniques may be introduced to reduce the emotional-behavioral problems among adolescents who are in excessive use of the internet.

This study has several limitations. First data were collected only from 2 cities in Pakistan which limit the generalization of results. Secondly, adolescents who were not enrolled in any government or private school or college could not focus in this study.

IMPLICATIONS AND RECOMMENDATIONS

Future research should explore ways of preventing and reducing emotional and behavioral issues in adolescents. Further studies should also focus on adolescents with physical and mental illnesses and those adolescents that are not studying in schools and colleges. It is recommended for future studies focus on other problems which interfere with their personal, academic, and social life in relation

CONCLUSION

Excessive use of the internet leads to addiction, and evidence is emerging that internet addiction has a harmful influence on adolescents' mental health and caused emotional-behavioral problems. Internet Addiction should be treated as a serious issue, and public awareness of its implications should be increased. Institutions should implement preventive initiatives to address this problem, and proper screening should be made mandatory at regular intervals to expose the severity of the problem

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