Impact of Digital Addiction on Emotional Status of Female High School Students

Authors
Ismael H.K.[1]* *PhD*
Naji A.B.[2] *PhD*

ABSTRACT

Aims Although the Internet has greatly benefited our daily lives, over usage of it can lead to addiction, which can negatively impact our life. This study aimed to assess the impact of digital addiction on emotional status of female high school students.

Instruments & Methods This descriptive correlational study was conducted in Baghdad Governorate from December 1st, 2022 to April 5th, 2023. 360 female high school students were selected using simple random sampling method. Data were collected using a questionnaire whose validity was confirmed by experts, and a pilot study confirmed the reliability of the results. This questionnaire had a total of 25 questions to measure digital addiction and 21 questions to measure mental health. Through the interview, data were gathered, and descriptive and inferential statistical analysis were used to analyze the data.

Findings The majority of respondents are female pupils in grades 4, with a mean age of 16.55±1.08 years. 49.7% of the high school pupils reported a high degree of addiction, and 50.6% had a moderate level of emotional status. The amount of time spent using devices during the week (β=-0.218; p=0.0001), the amount of time spent using devices on the weekend (β=0.137; p=0.019), and digital addiction (β=0.282; p=0.0001), all predicted emotional status.

Conclusion Emotional status is predicted by the time of device use during the week, the amount of device use on the weekends, and digital addiction.

Keywords Digital Technology; Internet Addiction; Emotional Status; Students

CITATION LINKS

[1] The effect of Internet addiction on students'emotional and ... [2] Internet addiction, mental health and academic performance ... [3] Internet dependency and emotional maturity among management ... [4] The effect of excessive Internet use on students academic ... [5] Impact of problematic Internet use on the academic stress and academic ... [6] Assessment of self hardness and its relationship to treatment acceptance for patients with diabetes ... [7] Efficacy of health belief model in enhancing exercise behavior ... [8] Efficacy of the health belief model in enhancing weight loss ... [9] Impact of physical activity program upon elderly quality of life at Al-Amara ... [10] Assessment of health beliefs about cardiovascular disease ... [11] Health beliefs about cardiovascular disease among elementary ... [12] Processes of change for weight control behavior among ... [13] Using the health belief model to understand physical ... [14] Evaluation of preventive behaviors of addiction among ... [15] Assessing the effect of an educational intervention based on health ... [16] Weight trend among middle school student: The mediating ... [17] Can food addiction predict weight trend among middle school ... [18] Efficacy of the health belief model on older adults' physical ... [19] Using the health belief model to predict the self- efficacy ... [20] Internet gaming disorder among high school students ... [21] Quality of life among elderly at primary health ... [22] Instructional sensitivity in vocational ... [23] Effectiveness of an educational program on female students' ... [24] Effectiveness of the health action process approach ... [25] Effect of obesity and socioeconomic status on adolescents' high ... [26] Health belief model and its relation to age and body ... [27] Evaluation of adolescents' quality of life ... [28] Self-esteem and its relationship with the age, gender ... [29] Effectiveness of education program on secondary ... [30] Evaluation of students' communication skills and academic ... [31] Screening for attention deficit hyperactivity disorder ... [32] Factors Influencing health and risk behaviors ... [33] Social capital and Internet use in an age -comparative ... [34] Internet addiction among college students: Some ... [35] Internet usage and its addiction level among ... [36] Associations between online friendship and Internet ... [37] Girls suffer: The prevalence and predicting factors ... [38] The relationships between Internet addiction ... [39] Internet addiction and psychological well-being ... [40] Internet addiction and happiness among ... [41] Internet addiction and psychosocial problems among ...

[1]Ministry of Health, Baghdad Health Directorate, Baghdad, Iraq
[2]Community Health Nursing Department, College of Nursing, University of Baghdad, Baghdad, Iraq

Correspondence
Address: Ministry of Health, Baghdad Health Directorate, Baghdad, Iraq.
Phone: 009647730080092
Fax: -
haliqoeen@yahoo.com

Introduction

The development of the digital era has affected almost all elements of modern life. The Internet is becoming a tool that people grow to rely on and has a significant impact on our social, political, economic, and even emotional life. People utilize the Internet for a wide range of activities at home, at school, and in public places, including communication, business, shopping, online bill payment, entertainment, and more. The Internet is accessible from smartphones, laptops, tablets, PCs, and smart televisions [1]. Although the Internet has greatly benefited our daily lives, over usage of it can lead to addiction, which can negatively impact our life [2].

The term "Internet addiction" refers to the inability to restrain one's want to use the Internet, which can lead to problems with one's mental well-being, interpersonal relationships, academic achievement, and/or employment [3].

The prevalence of Internet addiction among Asians ranges from 2.4% to 37.9% [4]. A study by a child and adolescent psychiatrist showed that students under the age of 24 have the highest rate of Internet addiction [5]. It is believed that students, especially undergraduates between the ages of 19 and 24, are more susceptible to developing an online addiction [6]. Most Internet users spend too much time on social media and online games. The negative consequences of excessiveness included anxiety, melancholy, health problems, lying, weariness, absence from school, unemployment, reduced productivity at work, and social isolation. In addition to melancholy, boredom, low self-esteem, and attention deficit hyperactivity disorder, addiction to the Internet may also be a factor [1, 6].

Long-term use of electronic games and smartphones by kids and teens has been linked to several physical and psychological issues, including weight gain or loss, back and neck pain, eyesight issues, social isolation, despair, and anxiety. Teenagers are most susceptible to technological addiction because they struggle with time management and self-control. Studies have revealed that teenagers with a lot of money, a dysfunctional home, and parental permission to use electronics during school hours experience low self-efficacy and low self-esteem.

This study aimed to assess the impact of digital addiction on emotional status among female high school students.

Instruments and Methods

This descriptive correlational study was carried out during the period from December 1st, 2022 to April 5th, 2023. The research was done at a high school run by the Baghdad Education Directorate. A probability sampling strategy (simple random sample) was used to select a total of 4 high schools.

Then a sample of 360 high school students, or around 10% of the overall student population of the high schools chosen, was selected for the current study using a probability sampling approach (Simple random sample). Students who wanted to participate in the study were included in the study.

The research tool was a questionnaire consisting of three parts as follows:

Part I: Demographic information such as age, grade, living situation, socioeconomic status, and factors associated with digital addiction.

Part II: 25 different factors related to digital addiction were measured using a 5-level Likert scale. Points can be earned between 25 and 125. Higher averages indicate less digital addiction. Cronbach's alpha in the latest data was 0.92, which shows an acceptable level.

Part III: This part was related to the emotional state, which had a total of 21 items that were measured using a 4-level Likert scale. The range of points obtained can be from 0 to 63. A higher average is considered good emotional health. Cronbach's alpha in the latest data was 0.87, which shows an acceptable level.

The researcher gave questionnaires to the study participants, then provided instructions, clarified any problems with the form, and thanked them for their participation.

The self-report techniques were used individually, with each report being submitted 15 to 20 minutes after completing the crucial tasks required by the study's design. Such selection was made from a subject pool [7-21].

All of the analyses were performed using SPSS 20.0 software. Qualitative variables were presented using numbers and percentages, and quantitative variables were described using mean and Standard Deviation (SD). A simple linear regression test was used to predict the study variables. Dependent variable was emotional status.

Findings

The mean age of the participants was 16.55±1.08 years. Fourth graders made up the majority (46.9%) of the students. In terms of socioeconomic status, more than half of participants (58.1%) were from the upper middle class. The majority of female high school pupils (90.3%) who utilized a digital device did so with a smartphone. Most participants (38.3%) reported spending more than 20 hours per week using device during the work week. Finally, 28.3% of students reported using their devices between 11 and 15 hours on weekends (Table 1).

49.7% of the high school pupils reported a high degree of addiction, and 50.6% had a moderate level of emotional status (Table 2).

Among female high school students, the amount of time spent using devices during the week (β=-0.218; p=0.0001), the amount of time spent using devices on the weekend (β=0.137; p=0.019), and digital addiction (β=0.282; p=0.0001), all predicted emotional status (Table 3).

Table 1) Frequency distribution of demographic characteristics of the studied students (n=360)

Demographic characteristics	No.	%
Grade		
Fourth	169	46.9
Fifth	143	39.7
Sixth	48	13.3
Socioeconomic status		
Upper-lower class	209	58.1
Lower middle class	113	31.4
Upper middle class	38	10.6
Having their own digital device		
Smartphone	325	90.3
Tablet (iPad)	19	5.3
PlayStation	3	0.8
X-Box	4	1.1
Laptop	9	2.5
Time spent using the device on weekdays		
<5 hours	18	5.0
5-10 hours	56	15.6
11-15 hours	53	14.7
16-20 hours	95	26.4
>20 hours	138	38.3
Time spent using the device on weekends		
<5 hours	27	7.5
5-10 hours	95	26.4
11-15 hours	102	28.3
16-20 hours	73	20.3
>20 hours	63	17.5

Table 2) Frequency distribution of digital addiction levels and emotional state of students and their mean scores (n=360)

Variables	No.	%	Mean±SD
Digital addiction			
High	179	49.7	
Moderate	155	43.1	57.22±21.78
Low	26	7.2	
Emotional status			
Poor	90	25.0	
Moderate	182	50.6	32.13±12.96
Good	88	24.4	

Table 3) The results of the linear regression test to predict the emotional state of students

Variables	Unstandardized coefficient		Standardized coefficient	t	p
	B	Std. error	Beta		
Age	-0.039-	0.034	-0.060-	-1.138-	0.256
Living situation	0.020	0.097	0.011	0.210	0.834
Socioeconomic status	0.029	0.053	0.028	0.540	0.590
Time spent using the device on weekdays	-0.123-	0.033	-0.218-	-3.727-	0.000
Time spent using the device on weekends	0.080	0.034	0.137	2.351	0.019
Digital addiction	0.318	0.057	0.282	-5.570	0.000

Discussion

We are in the early stages of the Information Age, when people started talking about how technology affects our lives, and that conversation continues everywhere. As a result of technological advances, society as a whole is forced to confront new difficult issues that affect health-promoting behaviors. The purpose of this study was to determine the relationship between digital addiction and emotional well-being of female high school students and health-promoting behaviors.

The mean age of participants was 16.55±1.08 years, with the largest frequency (36.7%) was reported for those under the age of 16, and the lowest percentage (1.1%) was for those over the age of 20. Findings from the Third Al-Rusafa Education Directorate, Iraq,

supports these conclusions [22-25]. The mean age in similar studies was 17.2, 16.7, 17.81, and 17.0 years [26].

In terms of grade, fourth grade students (46.9%), followed by fifth grade students (39.7%), and sixth grade students (13.3%) were predominant, respectively. These results are consistent with those of Baghdad City, where most of the participants were in the fourth grade [27-39]. They did this because they showed a stronger interest in participating in the study than others at that stage.

Findings related to living situation show that most female high school students (91.1%) live with their parents and a small percentage live with mother (6.7%) and father (2.2%). These findings naturally arise from the structure of our society. The main

focus of the family is on raising the child from infancy to adulthood [26].

The findings related to the socio-economic level indicated that the upper-lower class makes up more than half of the participants (58.1%), followed by the lower middle class (31.4%) and the upper middle class (10.6%). These results are consistent with primary school results in Baghdad city, where most households had a moderate income [30-33].

The results of the current study showed that a sizable proportion of female high school pupils (49.7%) had a digital addiction. The problematic and excessive use of the Internet by some people has given rise to the IA hypothesis [34-36]. Younger users are more likely to develop this addiction than older users [38]. Problematic Internet use has been widely studied in the past. They claim that a person with such problematic behavior can spend more time online than intended and seriously compromise their relationships [37]. The results showed that most high school girls (50.6%) had a moderate emotional condition. This finding is consistent with Akin's finding [38] regarding the emotional state of female high school students. The results of a study conducted in Norway supported previous findings that emotional disorders are on the rise in adolescence, especially in women. The findings of this research also indicated that coping beliefs play an essential role in the way pressure and stress are perceived, as well as in the subsequent onset of mental health problems [39].

The results of the simple linear regression test revealed that among female high school students, the amount of time spent using devices during the week (β=-0.218; p=0.0001), the amount of time spent using devices on the weekend (β=0.137; p=0.019), and digital addiction (β=-0.282; p=0.0001), all predict emotional status. These findings show that while Internet use based on the time spent on a device on the weekend is positively related to improving the emotional state of female students, its use during the weekdays is associated with a negative prediction of their emotional state. In general, one of the components that negatively predicts emotional state is digital addiction. The more addicted the person is, the worse the emotional state. Our findings are consistent with the findings of a study in Colombia, which showed that happiness and vitality were both negatively related to digital addiction [37]. Similar results were found in India, where there was a strong inverse relationship between students' psychological well-being and their digital addiction [40]. An Iranian study showing that socioeconomic class, attendance at private or public schools, and age are all associated with digital addiction supports the results of the present study [41]. According to a plethora of other studies, increased Internet use or digital addiction is harmful to happiness and emotional health. In addition, multiple logistic analyzes of the collected data showed that mothers who used the Internet more often (i.e., for a longer period of time) had lower levels of maternal education than mothers who used the Internet less. This finding conflicts with the findings of a recent study in Iran. Given that the data recommends minimizing Internet addiction to enhance emotional state, further investigation into the interaction between these factors is advised.

Our study has numerous limitations, the most significant of which are the sample size and study methodology. Despite this, we were able to clearly show that respondents' levels of emotional stability and digital addiction were both above average. Positive correlations were identified between high levels of digital addiction (low scores) and good emotional health (low scores), meaning that emotional state decreases as digital addiction develops. This study provides insights into health education for all social groups regarding emotional well-being and digital addiction. The decision-makers of the Ministry of Education should prioritize the reduction of digital addiction over the promotion of students' mental health.

To prevent mental deterioration and reduce academic stress for students, schools should develop mental health counseling by trained counselors. Considering that the incidence of psychiatric illness has increased rapidly over time, parents should be more vigilant about digital addiction, especially during adolescence.

Conclusion
Emotional status is predicted by the time of device use during the week, the amount of device use on the weekends, and digital addiction.

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