Original Article

Study the Relation Between Internet Usage and the Occurrence of Depression Among Kirkuk Technical Students

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Abstract

Background: Internet is regarded as one of the most indispensable parts in our life, and majority of young and adolescent people interested in the usage of it, but in some cases, these uses are become out of the control which later on lead to a condition called internet addiction in which it will be the predominant life activity. **Objective:** A descriptive cross-sectional study was conducted on Kirkuk Technical Institute students from January 1, 2017, to May 30, 2017 to study, if there is any relation between the occurrence of depression and internet usage. **Materials and Methods:** The total number of students included in the study was 550 from different scientific departments after distributing a special questionnaire form prepared for that purpose, and face-to-face interview was conducted after receiving the written consent from them. **Results:** The study results show that 60.8% of technical study students and 47.3% of students from administrative departments used internet daily, while 46.0% of students of health department used it weekly. In addition to that 72.1% and 67.8% male students from technical and administrative departments used internet daily, while female students from all departments (technical, administrative, and health) used the internet monthly; in addition to that 53.1% of students from administrative departments have a depressive attempts which affects daily activity and work in comparison to 18.5% of students from technical departments. **Conclusion:** The study concluded that the time spent for internet was about 7–9 h/daily with the presence of a suggestive depressive symptom which affects daily activity and work. **Recommendations:** The study recommended that further advanced educational programs about the main adverse effects of the internet and the main possible ways to control its usage.

Keywords: Depression, internet usage, relation, students

INTRODUCTION

The main innovation in the communication and informative technology field, especially in the internet lead to health and social effect on human beings.[1]

Internet can be defined as an assistant tool for acquiring a new updated knowledge, contacting with other social groups for easily communication, and expanding a self-personal relation, but still there is an informative defect in the adverse effect of excessive internet usage for a long time; which later on causing an (Internet addiction [IA] or uncontrolled internet usage) that can be expressed as interference of internet with once daily life which furthermore presenting with social and physiological symptoms such as anxiety, depression, headache, isolation, and aggressive nervousness with gradual deterioration of family life relationship.[2–4]

It has been reported that IA affecting human health, the suicidal attitude and the depression rate were increased which is regarded as the same as alcoholic and drug addiction.[5] It has been published that IA prevalence rate in Turkish people vary from (1.5% to 24.2%) which is much higher among young age groups than others because of unsettled their personalities,[6,7] while in Turkey, it is varies from (1.1% to 18.9%).[8]

The normal healthy goal of internet usage is to obtain an optimal desired within suitable period without behavioral or intellectual affection on the human body,[9] for that reason some people limit their usage to what they need only, while others cannot control their usage in which damage their daily work and social life.[10]

The relation between these two above variables (Depression and IA) are linked together and approximately happened twice

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as would be presumed to occur by chance alone, and this correlation is become more worsened with the other presence social media.[11,12]

The main psychological symptoms which gradually presents that may lead to depression and can be diagnosed through low dietary habits, severe anxiety, lifestyle changes with sleep disturbance, sociocultural changes, instability of the mood, irritability, low self-esteem, fear of future, and low motivation to life.[12,13]

Scientists and researchers have been documented in their studies that depression may happen because of social isolation due to IA, and there is a doubtful idea about the primary disease is due to internet usage alone or with the other associated factors that may lead to depressive state.[14,15]

The importance of study is because internet is widely used by publicly and the over usage of it leading to health and social problems, especially among students. The aim of the study is to assess the association between internet usage and occurrence of depression among Kirkuk Technical Institute students.

MATERIALS AND METHODS

Study design
A descriptive cross-sectional study design was conducted on students from two stages in Kirkuk Technical Institute after receiving official agreements before establishing the study.

Study setting and period
The study was carried out in Kirkuk Technical Institute on different scientific departments (technical, administrative, and health). The study was conducted from January 1, 2017, to 30, May, 2017.

Study sample and sampling method
The sample was randomly collected among 550 students from the first and second stages (250 students from technical department, 150 from administrative department, and 150 from health department).

A special questionnaire form was distributed to them after receiving their written consent from them, and the data were collected by face-to-face interviewing after complete explanation of the main objectives of the study.

The level of internet addiction measurement
The scale of adolescent addiction was used which was developed by Korea Centers for Disease Control and Prevention (KCDCP)[16] during 2010, which is consist from question about the average daily usage of internet with four options ranged from.
1 = mean using internet < 3 h/daily
2 = internet usage between 4 and 7 h/daily
3 = internet usage between 8 and 10 h/daily
4 = internet usage > 10 h/daily.

Therefore, students having a high scores, they were more prone to develop IA.

Depressive state measurement
For depression measurement, a specific signs and symptoms were included in the questionnaire form according to Hamilton depression scale[16] which are (feeling a tired, loss of interest, communication problems, remembering and making a decision difficulty, irritation and changing in eating habits). In addition to the above signs and symptoms, a single question of two choices answer with yes or no which is: Do you feel any hopeless or so sad that you cannot complete your work for the last 1 year ago?

Inclusion criteria
All the students used internet through their mobiles and laptops.

Exclusion criteria
All the students who are not having internet in their mobiles.

Data collection tool
A special questionnaire form has been prepared by the investigator utilizing available.

Related literature to the questionnaire item included four main parts:
*   Part 1 – Demographic characteristics including (age, sex, stage, residence, and scientific departments)
*   Part 2 – Information in regard to internet usage
*   Part 3 – Measurement of IA according to daily average use of internet
*   Part 4 – Distribution of study sample according to level of depression.

Reliability of the questionnaire form
The data were collected through the use of special questionnaire which was presented to (3) experts in different fields, they were (2) clinical physicians, (1) community physicians, and (1) statistical experts.

The results of reliability and validity were 70%.

Statistical analysis of data
The results were collected and analyzed by the following measurements:

descriptive statistics by percentages and numbers for questions with yes and no answer, number, and others variables; the Chi-square test was used to study the relation if there is any relation between variables and significance is taken at level 5% ($P < 0.05$).

RESULTS

The total number of study students were 670 distributed among three scientific departments.

The number of students responded to study was 550 and the response rate was (82.1%).

Table 1 shows that male constitute 52.9%, aging between (18 and 20) years (89.1%), from the first stage (45.4%), 76.3% from urban area and 45.4% from administrative departments.

Table 2 indicates that there was a statistically significant relation between the studied groups, because 60.8% of technical students and 47.3% of students of administrative departments used internet daily with a $P = 0.000$. On the other hand, 46.0% of students from health departments used internet weekly with a $P = 0.031$.

Table 3 presents that 72.1% and 67.8% male students from technical and administrative departments used internet daily, while female students from all departments (technical, administrative, and health) used the internet monthly (27.3%, 41.0%, and 39.3%), respectively.

Table 4 shows that 45.4% of students of technical departments who were used internet daily, they spent about 8–10 h/while 50.7% of students of administrative departments who were used internet daily for about 4–7 h.

On the other hand, 64.9% of students from health departments used internet daily for about 4–7 h with a $P = 0.003$.

Table 5 presents that 53.1% of students from administrative departments have a depressive attempts which affects daily activity and work in comparison to 18.5% of students from technical departments and 19.3% of students from health departments with a $P = 0.000$.

DISCUSSION

The current study shows that students from both (technical and administrative) departments used internet daily, while health students used internet weekly and this is due to their good knowledge and awareness of the side effects, and over load usage of internet which causing an addiction in the future. The same results were found by a study done by Ozgul et al.[17] among 1st year students from Eskisehir Osmangazi University/2012, to assess if there was any significant relationship between the occurrence of psychological symptoms among study students and internet usage. They found that the mean score of IA scale was 8.28. They mentioned that the main reasons behind that was the necessity of internet usage by the student for research conducting and paper writing with the following up the lectures and sections.

Concerning the relation of internet usage among study students according to gender, the present study show that males were widely used internet daily more than female students and this is because of sociocultural behavior which maintains her for avoidance from internet usage.

Laith et al.[18] prepared a similar study on 4388 students from JUST University in Jordan to examine and indicate if there was any correlation between the development of depression, signs of stress, anxiety and other psychological symptoms, and the occurrence of IA. They reported in their study that males were more profound to use internet than females and they blamed that differences because of the social media growth worldwide, and lack a deficient in the social control over all activities, especially internet like newspaper reading, chatting, and meeting new friends daily; unlike female groups who had a certain control and limitation on their duties and there was no any significant correlation or relation between gender and IA, which resulted due to a similarities between both males and females with referring to their families and associated pressure, academic structure outlines, and the students economic situation.

Another study was conducted by Koo and Kwon[19] in which they revealed that there was a significant relation or association between the gender and IA. They mentioned that the main differences in the density and content of education so, the level of internet usage is quietly different among students from variables colleges.

Concerning the time spent for internet usage, the present study shows that about half of the students from technical

Table 1: Sociodemographic characteristics of the studies ($n=550$)

Sociodemographic parameter	n (%)
Age group (years)	
<18	20 (3.6)
18-20	490 (89.1)
>20	40 (7.3)
Sex	
Male	291 (52.9)
Female	259 (47.1)
Stage	
First	450 (45.4)
Second	300 (54.6)
Residence	
Urban	420.(76.3)
Rural	130 (23.7)
Scientific department	
Technical	250 (45.4)
Administrative	150 (27.3)
Health	150 (27.3)

Table 2: Distribution of study sample according to internet usage

Internet usage	Study sample ($n=550$)				P*
	Technical departments ($n=250$), n (%)	Administrative departments ($n=150$), n (%)	Health departments ($n=150$), n (%)	Total (%)	
Daily	152 (60.8)	71 (47.3)	37 (24.7)	260 (47.3)	0.000
Weekly	53 (21.2)	44 (29.3)	69 (46.0)	166 (30.2)	0.000
Monthly	45 (18.0)	35 (23.4)	44 (29.3)	124 (22.5)	0.031

*P value ($P < 0.05$) was significant. Chi-square test used df=4

Table 3: Study sample distribution of internet usage according to gender

Internet usage	Study sample (n=550)							
	Technical departments (n=250)		Administrative departments (n=150)		Health departments (n=150)		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Daily	98 (72.1)	54 (47.3)	57 (67.8)	14 (21.2)	17 (23.9)	20 (25.3)	172 (59.1)	88 (33.9)
Weekly	24 (17.6)	29 (25.4)	19 (22.6)	25 (37.8)	41 (57.7)	28 (35.4)	84 (28.8)	82 (31.7)
Monthly	14 (10.3)	31 (27.3)	8 (9.8)	27 (41.0)	13 (18.4)	31 (39.3)	35 (12.1)	89 (34.4)

Table 4: Distribution of study sample according to level of daily internet usage

Scientific dept.	Study sample n=260 The level of daily internet usage								P*
	1		2		3		4		
	<3 h		4-7 h		8-10 h		> 10 h		
Technical depts.	28	18.4%	43	28.3%	69	45.4%	12	7.9%	0.000
Administrative depts.	7	9.9%	36	50.7%	26	36.6%	2	2.8%	0.087
Health depts.	6	16.2%	24	64.9%	7	18.9%	0	0.0	0.003

χ^2 test used DF=6. *P (P<0.05) was significant

Table 5: Distribution of study sample in regard to suggestive presences of depressive symptoms

Suggestive presence of depressive symptoms	Study sample n=219								P*
	Technical depts n=124		Administrative depts n=64		Health depts n=31		Total		
Yes	23	18.5%	34	53.1%	6	19.3%	63	28.7%	0.000*
No	101	81.5%	30	46.9%	25	80.7%	156	71.3%	

Only students with a score 2,3,4 were included in the study. *P (P<0.05) was significant

departments used between 8 and 10 h/daily while more than half of the students from administrative departments used it about 4–7 h daily, while two-third of health department students spent 4–7 h daily for internet usage.

Another study was prepared by Yoo et al.[20] from a nationality sample of middle and high South Korean school students, their ages between 12 and 19 years after presenting to them a self-administrated questionnaire form through a type of a web-based survey to assess the main factors contributing to internet usage in association with mental health. They found that the prevalence rate of IA was 14.8%, and the usage was more among boys than girls for ≥ 4 h/daily, especially during the week ends.

Further study was done in Vietnam[21] among college students to determine if there was any linkage between internet usage and the presence of psychological symptoms. They mentioned that there was a weak-to-moderate correlation between these two variables and they reported that there was a quite correlation between gender and the time spent for its usage, especially at the weekends which is significant related with age (P < 0.05).

The time which is spent for the usage of internet is very important factor for addiction state, because 40–80/h weekly or up to 20 h at one time may be the aggravating factors for hospital admission, and many studies have been mentioned that there was a strong association between the time duration of internet use and addiction occurrence.[22]

Regarding the depressive symptoms among the studied group, the current study show that about half of the students form technical departments who were used internet daily, they spent time between 8 and 10 h while more than half of students from administrative departments used internet daily for about 4–7 h in comparison to student from health departments who used internet about 4–7 h daily.

A study was done at faculty of education/Cyprus International University, the international journal of global revealed that among studied group of male (80) and female (46), there were a strong relationship between the presence of psychological symptoms and over use of internet, and majority of them presents with a signs of stress, anxiety, and low self-esteem due to IA.[23]

Similar study was conducted by Romano et al., among 60 volunteer students in Swansea University/United Kingdom which show that there was a significant correlation between the longtime usage for internet and the appearance of depression.[24]

Further study was prepared by Yeh et al. in Taiwan, among college students to detect if there is any relation between the internet usage and depression. They found that there was a positive results between these two variables, and discussed these association by the difficult educational process which would be so hard and stressful, in addition to that a study burden with the living a way from family members and the presence of psychological problems, all these risk factors may

increase the occurrence of depression among students which lead to IA.[25]

This study is very important in our life because of the current problem among students from different classes, and internet became one of the necessary and essential elements that cannot live without it, so over usage of it lead to many social and health problems.

CONCLUSION

The study concluded that more than half of the students from technical and administrative departments used internet daily while less than of students from health departments, and the time spent for internet was about 7–9 h/daily with the presence of a suggestive depressive symptoms which affects daily activity and work.

Limitation and recommendation

It is very quiet difficult to collect a questionnaire forms, the students because of the limited time and burden of the schedule with different scientific departments. The study recommended that further advanced educational programs about the health hazards of over usage internet with future more expanded studies and researches on wide range of population to assess the main effects of internet on human activities.

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Conflicts of interest
There are no conflicts of interest.

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