

Prevention Program of Internet Addiction among Preparatory School Students

Hemat Abd Elmoneem Elsayied*, Sahar Ahmed Shafik ** & Seham Guirguis Ragheb*
Community Health Nursing, Faculty of Nursing, *Ain Shams & ** Helwan University.

ABSTRACT

Internet addiction is a broad concept. Despite inconclusive or inconsistent definition of this disorder, usage of the internet is growing rapidly each year, especially among adolescents, making it imperative to look into factors that can be correlated to its. **Aim:** The aim of the study was to evaluate the effect of the prevention program of internet addiction among preparatory school students. **Design:** A quasi-experimental design was used. **Setting:** The study was conducted in two preparatory schools were chosen randomly and representing the urban area (Al Abbasia district, Cairo Governorate). **Sample:** A multi-stage random sample technique equal 110 students was randomly selected in this study. **Tools:** Three tools were utilized in this study in **Tool I:** A structural interviewing questionnaire was used for assessing socio-demographic characteristics of the students', their knowledge related to the internet use, physically and mentally health problems & student school performance, **tool II:** internet addictive behavior scale, for assessing students physical effect, social effect, cultural and economic effect, and psychological effect and **tool III:** Observational checklist were used to assess students practice toward ergonomic exercises. **Results:** More than half of the students were male ,there were highly statistically significant differences pre and post implementation of the prevention program regarding students' knowledge concepts, aim of computer used, uses , risk factor, important of balanced diet, important of ergonomic exercises, physical and mental health problems & highly statistically significant correlations were found between internet addiction and depression, anxiety and stress levels of students among preparatory school students . The highest total mean score was related to the psychosocial changes of prolonged internet use **Conclusion:** The study concluded that improving student knowledge and practices regarding internet addiction after implementation the prevention program This study showed highly statistically significant correlations between internet addiction and depression, anxiety and stress levels of students at $p < 0.01$ regarding physical, social, cultural and economical & Psychological effects of prolonged internet usage .**Recommendations:** Continuous prevention program about internet addiction among preparatory school student, Also booklet and a pamphlet containing knowledge and practices regarding complication of internet addiction, researches are needed to detect the other problems to early management.

Keywords: Internet Addiction, preparatory school, prevention program

Corresponding author: hematmohamed177@yahoo.com

Introduction

Internet addiction is defined as experiencing physical, mental and social problems because of Internet and computer overuse. Internet addiction has a negative impact on workplace relations, interacting

with friends, academic life and family life. Internet addicts spend most of their life in front of the computer passing the time with e-mails, chatting, discussion forums and online games. In a sense, can say that Internet addicts move their social lives in the Internet environment. Today, the problematic Internet

use and Internet addiction appear to be social issues that should be addressed without delay. In this regard, adolescents and young adults constitute the largest target group (**Canan et al., 2012**). Increasing time spent on the internet per day is also a feature of internet addiction; this was also finding of **Niemz et al.,(2013), and Nalwa and Anand, (2015)**, this is most likely due to the inability of adolescents to restrict their time online, especially when they engage in chat and community websites, and the availability of 24 hours internet service at homes.

Preliminary studies done by the National Center of Education Statistics, have shown that a large number of children and adolescents in America (5 to 17 years old) have access to the internet, and are being exposed to the internet at a very early age; with 78% of adolescents in the age group 15–17 years being internet users, (**Dowling and Brown, 2012**). There has been an explosive growth of internet usage worldwide and this is expected to continue with its use becoming an integral part of everyday life. The internet has become more accessible in homes, schools, colleges, libraries and internet cafes; access is further aided with the increasing affordability of home computers and high-speed connections over the last decade (**Koc and Tamer, 2015**).

School and academic problems are evident by researchers, internet addicts showed a less degree of school performance as well as more absence rate from school. This factor was also found by all previous researchers, such as **Michael,(2014)** who considered this factor one of the criteria for the diagnosis of internet addiction in his scales.

Common online activities include completing schoolwork, playing online games, reading and writing emails and engaging in real time chatting. The internet provides tremendous educational benefits including access to information across a wide

variety of topics, establishing educational links and enhancing communication with teachers and classmates. However, excessive internet use can lead to negative outcomes such as poor school performance, social isolation, and might impede an adolescent's achievement of psychosocial developmental tasks (**Anderson& McFarlane, 2013**).

Prevention program in schools focuses on the social and scholarly skills of the children, such as the improvement of the relationship with their peers, self-control and dealing with difficult situations. The ideal application framework is the integration of these programs into the curriculum because factors such as school failure are often associated with the development of substance-related addictive behavior. These programs reinforce the bonds of the students to school and decrease the possibility of dropping out of school. The last generation of programs contains interventions that affect the school environment as a whole (**Durkee, 2014**).

The community health nurse has a crucial role in the seamless provision of comprehensive health services to school students regarding prevention of internet addiction through health promotion and disease prevention by analytic assessment, cultural competencies and program planning to help them to change their unhealthy related practice regarding internet usage (**Anderson& McFarlane, 2013**).

Significance of the study:

In Egypt, more than 80% of Internet Café clients were young people, 60% of the students surveyed spent their time chatting, 20% browsing pornography sites, 12% conducting business or scientific work and 8% visiting political sites (**UNDP & INP, 2014**).

In Egypt, the **Internet World State(IWS) (2012)** indicated that, Egypt

now has the largest internet market in Africa ,which the prevalence rate of internet use in the year (2012) was 35.6 % of the total population while in the year (2011) was 24.5%, in the year (2009) was 21.1%, in (2008) it was 12.9%. Excessive use of internet leads to addiction and cause many problems. Internet addiction is becoming a new kind of disorder of the society and many practitioners are unaware of and consequently unprepared to treat and need the efforts of multiple and different researches as in the Egyptian society to confront such a phenomenon.

Aim of the study:

This study aims to evaluate the effect of prevention program of internet Addiction among Preparatory school students through;

1-Assessing preparatory school students' knowledge and practices related to uses of the internet.

2-Assessing school students' biopsychosocial effect of internet addiction on their health to detect educational needs.

3- Planning and implementing a prevention program based on the school students' educational needs.

4- Evaluating effect of the prevention program on the knowledge, practices and the biopsychosocial status of internet users.

Research hypotheses:

The prevention program will improve school students' knowledge, practice and the biopsychosocial status to prevent internet addiction & maintain of their health.

Subjects and Methods:

Research design: A quasi-experimental design was used.

Settings:

The study was conducted at two preparatory schools were selected randomly from 4 schools representing the urban area (Al Abbssia district, Cairo Governorate) for both sex representation their names Sabeel El-Khazendar&Ahmed Fouaad Abd El Aziz for Boys school (1088) students & El-Abasia and Ghamra school for girls (1186).

Sampling: A multi-stage random sample technique was used in this study.

First stage: The total number of governmental preparatory schools in (Al Abbssia district, Cairo Governorate) are (4), two were chosen randomly for school boys and girls for conduction of the study.

Second stage: One class from 2nd grade preparatory was selected randomly from each school. Their total number was 120 students, 10 of them were chosen randomly for pilot study& excluded from the study.

Third stage: All (110) students in the selected classrooms were taken from the two classes, (both sexes) according to certain criteria:

1- Their ages ranged between (14-15 years), which are considered as preadolescents and prevention program have great benefit for maintenance of their health.

2- They got an acceptance letter from their parents to participate in the study.

Tools: Three tools were utilized in this study:

Tool I: A structural interviewing questionnaire was used in the study developed by the researchers after reviewing the national and international related literature & contained three parts:

First part: Concerned with students' characteristics data related to variables such as gender, residence, the number of a sibling, family economic status, own computer, used the internet before, parent knowing about internet activities, the preferred type of website and experience of internet user.

Second part: Concerned with students' characteristics related to school performance to detect their needs as, a degree in the last semester, the number of absence from school last month, neglecting studies, Withdrawal from school social activities and events, and, the average time using the internet every day.

Third part: Students' knowledge regarding the following:

A- Assessing their knowledge related to the internet as, the concept of the internet, uses of computer, aim of computer use, risk factors associated with using the internet among preparatory students, Important of ergonomic exercises and components of the balanced diet.

B- Assessing their knowledge related to physical & mental health problems caused by prolonged use of internet included:

1-Physically health problem as, hand callous, constipation, weight loss, urinary tract infection, joint stiffness, difficulty in concentrating, fatigue, headache, back pain, and eye strain

2--Mental health problem as, feeling sad, anxious, irritated, powerful, euphoric, lost track of time, happy, at ease and in control.

Scoring system: The total knowledge included 28 closed-ended questions which included 108 items, every correct answer scored 1 grade, the total knowledge scores =108 grades. The total score was evaluated as follows: knowledge was considered satisfactory if the score was 50% or more and

unsatisfactory if less than 50%. (This part was used pre and post program to evaluate the effect of the program).

Tool II: Internet Addictive Behavior Scale was developed by **Wahid et al., (2006)**. It consisted of 81 items in a Likert scale It measured the following aspects.

Assessing the physical effect of internet use on school students (8 items). It concerned with asking the student about the following whether he/she feel a headache, chronic pain, eye fatigue, muscle and joint weakness after use, elevation of body temperature, memory loss, disrupt attention &cause insomnia(sleeping disturbance).

Assessing the social effect of internet use on school students (4 items). It concerned with asking the students about the following if use it loss time, loss the time spent with family, loss control of self if loss sits in front of the computer.

Assessing the cultural and economic effect of internet use on school students (5 items). its concerned with asking the student about the following if it appears personal hobbies and talents, encourages the aggressive behavior from the game, pays a lot of money on long calls, needs a lot of money in maintenance, accessories of the computer. Raw scores for each item range from 1- 4; never (1), rarely (2), usually (3), and always (4).The highest score indicates the highest effect. (This part was used pre and post the prevention program to evaluate the effect of the program).

Assessing the psychological effect of internet use on school students The modified version of internet addictive behavior scale, The depression, anxiety and stress scale (**DASS**) by **Lovibond, (1995)** 42- a questionnaire which included three self-report subscales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three

subscales contained (14 items), depression (14 items), anxiety (14 items), stress (14 items) divided into subscales of 2-5 items with similar content. Subjects were asked to use 4 –point severity /frequency responses range from: did not apply to me at all, to apply to me very much, or most of the time, in order to rate the extent to which they have experienced each state over the past two to three weeks.

The highest score indicates the highest effect. The modified version of internet addictive behavior scale was tested for its content validity by 3 psychiatric nursing experts and the new scale was modified by the researcher accordingly. This modified instrument was also reviewed by an expert in medical statistic to making scoring system. Following the judgment of the experts, some items were omitted to shorten the scale and to avoid repeated items and other items are clarified.

Scores for depression, anxiety and stress were calculated by summing the scores for the relevant items. The total score ranges from (14-42). The higher score indicates negative emotional status. Reliability of three scales is considered adequate and test-retest reliability is likewise considered adequate with .71 for depression, .79 for anxiety and .81 for stress. This scale was used to assess the level of psychological effects among school students.

Tools III: An observational checklist was used for assessing students' practices toward ergonomics exercises it was developed and filed by the researcher. It included eye exercises, hand, elbow, shoulders, triceps while sitting or standing, Legs, neck, lower and upper back and components of the balanced diet. (This part was used pre and post program to evaluate the effect of the program).

Scoring system: The total score of practice was 15. The item has scored (1) =

correct and the item has scored (zero) = incorrect. From <60 incorrect and ≥60 correctly done.

Operational design:

Preparatory phase:

A review of the current, past, local and international related literature and theoretical knowledge of various aspects of the study using books, articles, the internet, periodicals, and magazines was done. Tools were tested for content validity by Jury of three experts in the field of Community Health Nursing and three psychiatric nursing experts Specialty to ascertain relevance and completeness.

Tools reliability: The reliability of the development tools used was assessed through the internal consistency method. The tools reliability proved to be very good, with Cronbach alpha coefficient 0.86.

Reliability tested through test and retest assessing equation. The coefficients of stability that are between 1 and 0? The following guidelines can be used:

- 0.9 and greater: Excellent reliability
- Between 0.9 and 0.8: Good reliability
- Between 0.8 and 0.7: Acceptable reliability
- Between 0.7 and 0.6: Questionable reliability
- Between 0.6 and 0.5: Poor reliability
- Less than 0.5: Unacceptable reliability

Pilot study:

A pilot study was conducted on 10 students of the total study sample 120 to test

and evaluate the clarity, and applicability of the study tools and time required for completion of each study tools also, pilot study sample were excluded from the main study sample.

Ethical Consideration:

Each mother and her child were informed about the purpose and benefits of the study, then oral consent was obtained before starting the data collection. Strict confidentiality was ensured throughout the study process. The study subjects were assured that all data was used only for research purpose and child were informed of the rights to refuse or withdraw at any time with no consequences.

Fieldwork:

After official permissions to carry out the study, the aim of the study was explained to the selected subjects. The study was carried out along a two semesters of (2014/2015). The average time consumed to fill tool was 45 minutes. The previously mentioned settings were visited by the researchers two days/week (Saturday and Thursday) from 10.00 am to 2.00 pm.

Prevention program construction: It included 4 phases:-

First, preparatory phase: A pre-program assessment tool, using the previous structure interview questionnaire for data collection from preparatory school students. This phase aimed at identifying the students (male & female) learning needs towards useful uses of the internet and prevention of internet addiction.

Second, assessment phase: By using pre-testing tool to assess the present students knowledge and practices for healthy used by computer and addictive behavior.

Third, Planning and implementing phases: By developing the prevention program

- The general objective of prevention program was to improve the school students knowledge and practices to prevent addiction of computer used and aims were explained to all student participants.
- Based on the result of the pre-test questionnaire the researcher utilized the content of the program and a number of sessions needed, 7 sessions (5 theory & 2 for practices) each session for each group (6 groups) were around 1-2 hrs.
- Each session started by giving the objectives, taking into consideration using simple and clear Arabic language.
- School students divided into 6 groups, and each group consisted of (15-20) students approximately.
- By the end of each session, the students were informed about the content of the next session and it's time.

The content of the program: Prevention program tailored to suit school students' educational needs and included.

Knowledge for the students to prevent internet addiction & healthy usage as the meaning of the internet, aim of the computer used, uses a computer, risk factors of the internet, a component of balanced diet especially for this age to prevent weight loss, diet control, and unhealthy diet. Important of ergonomic exercises to increase circulation, improve general health, increase alertness and concentration; Improve posture by increasing body awareness; Improved potential to prevent and/or eliminating muscle and joint pain.

- **Knowledge to prevent physically & mentally health problems caused by prolonged use of internet** through gradually reducing the amount of time he or she spends on the Internet, using the time away from the computer to do homework, playing a board game, or watching a television show, Encouraging other social activities. Consult of medical services in case of medical problems to treat any physical problems such as a headache, eye strain, joint stiffness instruction for how to avoid constipation.

General instruction for Students regarding school performance as encouraging the students to participate in school activities; improving the relation with friends at school and teachers, normal sleeping pattern, regular attendance at school, relaxing, assisting with school work, communicating with others & helping to search for information of interest.

Prevention of Internet Addictive Behavior by:

- Manage their time online by keeping a log of internet usage
- Develop coping skills in order to reduce urges to use the internet.
- Set a timer to reduce the amount of time that spends online by setting a timer before going online and making a commitment to get off of the computer when the timer goes off.
- Substitute internet usage with healthy activities. Instead of going online, take a walk, read a book, call a friend or find another way to fill the time with a healthy activity.
- How to participate in other creative activity, manage time appropriate, no

internet access at home, self-awareness& improve the family relationship.

- Cognitive behavioral therapy helps to become aware of inaccurate or negative thinking& to help anyone learn how to better manage stressful life situations.

Developing new hobbies through:

- Take up walking or jogging, join a recreational sports league, basketball, football, whatever you enjoy the most, Join a book club, Prepare home-cooked meals that taste delicious, save money, and eat up your spare hours when you'd normally be surfing the internet.
- **Practicing ergonomic exercises, including:**
- **Eye exercises :** Cup your hands and place them lightly over your closed eyes, hold for a minute, while breathing deeply in and out, slowly uncover your eyes Look away from the computer screen every half hour, focus on an object at least 20 feet away, Look back at the screen, then look away and focus again and repeat three times.
- **Hand, elbow while sitting or standing:** Gently push elbows back with arms parallel to the floor; Push palms forward while extending arms, Spread fingers apart; and Repeat three times.
- **Shoulders while sitting or standing:** Push elbows back, hold for 5 seconds repeat 3 times. Relax shoulder, roll them forward& backward 5 times, repeat as needed. Stand and stretch arms outward, make small, gentle

circles with your arms and repeat 5 times.

- **Neck:** Place your right hand on your head, let your neck gently stretch toward the shoulder, hold the stretch for about 20 seconds & repeats 3 times on each side.
- **Triceps while sitting or standing:** Bring one arm in front of you and bend your elbow while placing a hand over the opposite shoulder, gently push elbow toward chest for about 20 seconds, repeat with the other arm, repeat as needed.
- **Lower back:** Push your chair a full arm stretch away from your desk, lean forward and try to touch the floor, return to sitting position & Stand with your hands supporting your low back, gently arch your back, hold for 5 seconds. Repeat as needed.
- **Legs:** With your back supported by a chair, extend the leg, flex your foot and raise the leg, repeat with other leg and repeat as needed.
- **Fourth, Evaluation phase:** This phase aims to evaluate the effect of the prevention program among students about prevention for internet addiction. Two post-test were administered to the study subjects the first one in the 1st semester immediately after completion of the program. The second at the end of 2nd semester.
- Methods used through the sessions were discussions, role play, followed by demonstration and re-demonstration. As well, audiovisual aids were used such as posters, handouts, booklets, using simple Arabic language.

Statistical design:

Collected data was arranged, tabulated and analyzed using suitable statistical methods such as numbers, percentages, means and standard deviations, chi test and t-test. Level of significance was threshold at 0.05 ($P > 0.05$ = insignificant, $P < 0.05$ = significant and $P < 0.001$ = highly significant).

Results:

Table (1): Showed that 54.5 % of the study sample were males while 45.5% was females

67.3% their number of sibling 2-3, 70% of their family had insufficient income, 86.4% used the internet before, 27.3% their parents knowing about internet activities, 92.7% and 81.8% Preferred website for Chatting and E-mailing respectively and 56.4% used the internet more than 5 years.

Table (2). Fig1: Revealed that effect of internet used in school performance was associated with a lower degree of school performance, only 33.3% of male students had grades more than 90% last semester, compared to 44.0% for females also, the internet addicts have a higher absence rate from school, 40.0% of males have more than 5 absence days last month, compared to 18.0% for females and 43.3 % of males Preferred Internet cafe. Regarding the average time spent on the internet per day, internet addiction was associated with more hours using the internet every day 100% for males are using the internet more than 5 hours per day, compared to 92 .0% for females also Participating with school activities only 5.0% of a male student compared to 22.0 % for females.

Table (3): Showed that, there were differences in the levels of depression among the school, students , The presence of

moderate level of depression was higher in males students 36.7% represented by 38.0% in females students, also differences in the severity of anxiety levels was higher in males 38.3% where the higher moderate level in the females students 52.0%. Regarding Stress levels, the males students' presence of stress was at moderate levels and a severe level higher in the females 64.0%. There was no statistically significant difference among the students as regards levels of depression, anxiety and stress $p > 0.05$.

Table (4): Reflected that, the highest total mean score was among the male and female students (52.18 ± 38.18 , 53.53 ± 33.46) respectively regarding total addictive behavior scale.

Tables (5): Stated that pre-program 18.3% , 20%, 5%, 25%, & 6.7% VS 81.7%, 80%, 95%, 83%, 75% & 93.3% post program of male students had knowledge about the meaning of internet, the aim of computer used, uses, the risk factors of internet ,

Important of balanced diet, Important of ergonomic exercises, while regarding female students pre program (18.0%, 10.0, 12.0, 36.0 VS 82.0, 86.0, 88.0, 84.0) post program of female students. The same table showed that there were highly statistically significant differences pre and post implementation of the program at ($p < 0.001$).

Table (6): Showed that a highly statistically significant difference was found between pre and post program implementation regarding preparatory school students and their total correct practices for types of ergonomic exercises & component of balance diet at ($p < 0.001$).

Table (7): Illustrated that, highly statistically significant correlations between levels of depression, anxiety and stress of school students and addictive behavior including physical, social, cultural and economical & Psychological effects of prolonged internet usage at $p < 0.01$.

Table (1): Distribution characteristics of preparatory school students (N= 110)

Item	No.	%
Gender:	60	54.5
Male	50	45.5
Female		
Residence	100	0.00
Urban		
NO of sibling		
1	5	4.5
2-3	74	67.3
+4	31	28.2
Family income status	33	30%
Sufficient	77	70%
Insufficient		
Own Computer	110	0.00
Used internet before	95	86.4
Parents knowing about internet activities	30	27.3
Preferred website		
E-mailing	90	81.8
UN prefers website	15	13.6
Chatting	102	92.7
General website	60	54.5
Games	110	0.00
Others	70	63.6
Experience of internet user		
<6 months	10	9.0
6monthes-2years	18	16.4
2years-5years	20	18.2
>5 years	62	56.4

Items are not mutually exclusive

Table (2): Distribution of preparatory school students regarding the effect of internet used on school performance (N= 110).

School performance	Male(60)		Female(50)	
	No	%	No	%
Degree in the last semester				
90% & above	20	33.3	22	44.0
80-<90%	17	28.3	15	30.0
70-<80%	12	20.1	10	20.0
<70%	11	18.3	3	6.0
Preferred place for using the internet				
Home	19	31.7	50	00.0
Internet cafe	25	41.7	0.0	0.0
School	0	0.0	0.0	0.0
Others	26	43.3	0.0	0.0
Participate in school activities	3	5.0	11.0	22.0
Average internet using hours/day				
> 5 hours	60	0.0	46	92.0
> 3 ≤ 5 hours	0	0.0	4	8.0

Fig1: Distribution of preparatory school students regarding the number of absence days from school last month (N= 110)

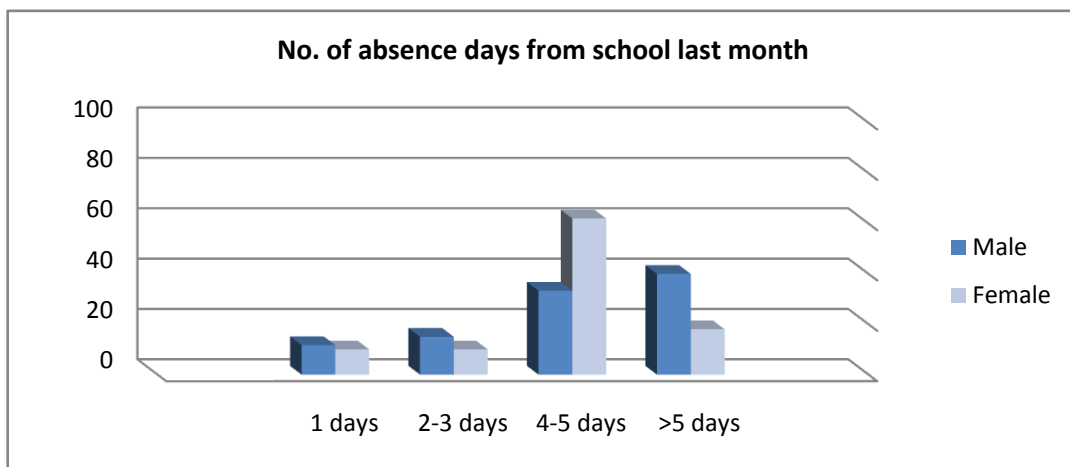


Table (3): Distribution of preparatory school students ,according to psychological effects of prolonged usage of internet (depression, anxiety and stress) (N=110).

psychological effects	Male (N =60)		Female (N=50)		Chi-square	
	No	%	No	%	X2	P-value
Depression level						
Normal level (0 - 9)	20	33.3	10	20.0	4.42	> 0.05
Mild level (10-13)	6	10.0	10	20.0		
Moderate level (14-20)	22	36.7	19	38.0		
Sever level (21-27)	12	20.0	11	22.0		
Anxiety level						
Normal level (0 - 9)	10	16.7	0	0.0	2.96	> 0.05
Mild level (10-13)	15	25.0	9	18.0		
Moderate level (14-20)	12	20.0	26	52.0		
Sever level (21-27)	23	38.3	15	30.0		
Stress level						
Normal level (0- 9)	11	18.3	0	0.0	7.7	> 0.05
Mild level (10-13)	11	18.3	7	14.0		
Moderate level (14-20)	30	50.0	11	22.0		
Sever level (21-27)	8	13.0	32	64.0		

Table (4): Distribution of preparatory school students according to their total addictive behavior scale among school students (N=110).

Variables total scores	Male	Female
	Mean±SD	Mean±SD
Physical effects of internet	31.17 ±7.18	32.47±6.48
Social effects of prolonged internet usage	75.02±17.11	73.00±16.93
Cultural and Economical effects of prolonged internet usage	36.22±5.59	36.50±4.86
Psychological effects of prolonged internet usage	16.37±5.53	15.36±5.18
Total addictive behavior scale	52.18±38.18	53.53±33.46

According to the research hypothesis:

Prevention program will improve school students' knowledge and practices regarding use of internet & prevent addiction (table,5,6,7) .

Table (5): Percentage distribution of preparatory school students according to their satisfactory knowledge pre/ post program about internet addiction (N=110)

Parameter	Male(60) Satisfactory		Female(50) Satisfactory	
	Pre %	Post %	Pre %	Post %
Meaning of internet	18.3	81.7	18.0	82.0
X ² =0.133 P<0.001				
Aim of computer used	20.0	80.0	10.0	86.0
X ² =16.133 P<0.001				
Uses of computer	5.0	95.0	12.0	88.0
X ² =104.533 P<0.001				
Risk factors of internet	16.7	83.0	0.0	84.0
X ² =53.333P<0.001				
Importance of balanced diet	25.0	75.0	36.0	84.0
X ² =64.533P<0.001				
Importance of ergonomic exercises	6.7	93.3	0.0	0.00
X ² =120.000P<0.001				
Physical health problems	0.0	88.3	0.0	92.0
X ² =150.520 P<0.001				
Mental health problems	0.0	91.7	0.0	88
X ² =153.557 P<0.001				

Table (6): Percentage distribution of preparatory school students according to their total correct practices pre/ post prevention program (N=110)

Total practices	Male(60) Correctly done		Female(50) Correctly done	
	Pre %	Post %	Pre %	Post %
Component of balanced diet	16.7	83.0	22.0	90.0
X ² =97.200 P<0.001				
Types of ergonomic exercises	0.0	100.0	6.0	92.0
X ² =120.000 P<0.001				

Table (7): Correlations of addictive behavior scale and levels of depression, anxiety and stress among school students

Addictive behavior scale	Depression scale		Stress scale		Anxiety scale	
	Significant		Significant		Significant	
	r	p- value	r	p- value	r	p- value
Physical effects of internet	-0.049-	> 0.05	- 0.068-	> 0.05	- 0.052-	> 0.05
Social effects of prolonged internet usage	0.233**	< 0.01	0.230**	< 0.01	0.214**	< 0.01
Cultural and Economical effects of prolonged internet usage	0.235**	< 0.01	0.159**	< 0.01	0.211**	< 0.01
Psychological effects of prolonged internet usage	0.332**	< 0.01	0.291**	< 0.01	0.330**	< 0.01

used the two-way communication functions available on the internet (chat and online games).

Discussion:

The computer’s role as an essential office and home technological resource has developed faster than having a general public understanding of potential health problems from poor body alignment and the effects of long hours in front of a keyboard and screen. Moreover, since these conditions typically do not cause acute pain or other immediate warning signs, many people are slow to connect their initial discomfort with their computer use and associated poor ergonomics (Petrie and Gunn, 2015).

According to the socio-demographic characteristics of the study sample, more than half of the studied sample were males. This result in contradicting with the study done by Naffise et al.,(2013) who reported that, most of the studied samples were females and others were males& on the same line with the study of Reda ,(2012) who reported that, around two-third of the studied subjects were male students and the other were females.

The preferred websites by internet addicts are the two-way communication websites, which are chat rooms and games websites. & e-mail. These findings are similar to those of Young and Rodgers, (2012) who found that non-addicts predominantly used those aspects of the internet which allowed them to gather information (i.e., Information Protocols & E-mail). Comparatively, addicts predominantly

The level of parents’ control over the internet at home is found more than one-third rarely knows about internet activity and the majority of them experienced used more than 5 years. These findings are consistent with the studies done by researchers like Shapira et al. (2013), (Young and Rodgers 2012), and (Petrie and Gunn,2015). This is Parents’ control can be worsened by a seriously disrupted relationship with their addicted children because they gradually spend less time with real people in their lives for their increasing time in front of the computer

As regards School performance showed a less degree of school performance as well as more absence rate from school. This factor was also found by all previous researchers, such as Young (2012), Caplan (2012), who considered this factor one of the criteria for the diagnosis of internet addiction in their scales. Increasing time spent on the internet per day is also a feature of internet addiction; this was also finding of Niemz et al., (2013) and (Nalwa and Anand, 2015). This is most likely due to the inability of adolescents to restrict their time online, especially when they engage in chat and community websites, and the availability of 24 hours internet service at homes.

The result of the present study showed that the highest score of internet addiction

was related to the psychosocial effects of prolonged internet usage of the preparatory students as presented in. This result was on the same line with **Sayied et al. ,(2012)** who found that the highest total mean score of internet addiction was related to social communication changes of prolonged internet use among students. Also, (**Gencer and Koc, 2012**) reported that a higher mean score of internet addiction (80.16 ± 8.92) among the study sample appeared to relate to psychological problems. This finding was in accordance with **Kesici (2013)** who found that the lowest total mean score (26.93 ± 8.15) of internet addiction was related to interpersonal and health problems among the studied group. The interpretation of the above-mentioned findings could be due to that many students use the internet as a way to escape from family or community pressure or to relieve unstable mood. Also, the internet allows for the person the means to fulfill unmet emotional and psychological needs which are more intimate and less threatening than real life relationships. Also, in the case of excessive use of the internet, the person can leave the real world, and that can give way to isolate and trying to decrease these emotions through establishing relations in the virtual world, the person can be deprived of the benefits of face to face communication.

Regarding levels of anxiety, the present study showed that the severity of anxiety was higher in the male students than female. These results could be due to students don't have a bright hope in the future in regarding their graduation. This result was in accordance with **Dalbudak, (2013)** who reported that most of the studied sample have higher scores of anxiety in both male and female students with no comparison between them. The current study revealed that there a highly statistically significant correlation was found between internet addiction and anxiety. This may be due to that, the anxious students use the internet to overcome their anxiety, to escape from uneasy thought which lead to anxiety. This result was on the same line with **Zaman,(2012)** who found that there was a

highly statistically significant correlation between internet addiction and anxiety($R = 0.54, p < .01$). Also, (**Adaher and Balkan, 2012**) found that there was a highly statistically significant correlation between internet addiction and psychological symptoms as depression.

Correlation between internet addiction and depression among the students. Regarding levels of depression, the present study showed that the students experienced a moderate level of depression. This result could be due to that, the students study hard courses and have many duties or an excessive load of science subjects, and low leisure time makes them depressed. This result was congruent with **Kotikalapudi et al., (2012)** who found that, (30%) of students exhibiting moderated depressive symptoms. Also, (**Jenaabadi and Keikhayfarzaneh, 2011**) reported that (70.4%) of study sample who study science has depression. The current study showed that there highly statistically significant correlations were found between internet addiction and depression among all students. This result was consistent with **Park et al .,(2013)** who found that the presence of problematic internet use was significantly associated with depression. Also, **Guo et al., (2012)** and (**Morrison and Gore, 2010**) reported that there were significant relationships found between internet addiction and depression. This finding also was supported by **Andrei, (2013)** who reported that their significant relationships were found between internet addiction and depression. These results could be due to that, depression or low self-esteem may act as factors which initiate internet addictive behavior in order to run away, avoid, or cope with such negative thoughts and feelings as lonely. In addition, depressed students may turn to the internet to alleviate painful feelings because they can find psychological support with others online where they may be lacking in their real life.

The correlation between internet addiction and stress among preparatory school students: the present study showed that the presence of stress was at a

moderate level in males and severe in the females. This result was consistent with (Thawabieh and Qaisy , 2012) who found that the stress levels experienced by the students are moderate. In addition, the present study showed that there was a highly statistically significant correlation was found between internet addiction and stress. This result was consistent with Yan, et al., (2013) who reported that the studied sample with severe internet addiction had more stressful life events than the non-addicted group. Also, this finding was supported by (Tang and Wang , 2012) who reported that significant correlation was found between internet addiction and stress. In the same context, Xie et al., (2015) who reported that the students with stressful life events with family and interpersonal communication were more likely to develop internet addiction. This result was incongruent with Alavi, (2014), Sammis,(2012), Campbell et al.,(2013) who mentioned that there were no relationships between internet addiction and depression, anxiety and stress. This may be due to that, the internet may provide an environment for the student to escape from stress in the real world and using it as a coping mechanism. As an addictive behavior often acts as a buffer to cope with missing or unfulfilled needs which arise from unpleasant events or situation in one's life that is, this behavior ,it allows the person to forget the present problems and considered as a way to cope with the stress of hard situations.

Conclusion:

Based on the finding and research hypotheses of the present study, it can be concluded that:

Applying of the prevention program led to highly statistically significant improvement regarding school students' knowledge, practices and their biopsychosocial status. Also, This study showed highly statistically significant correlations between levels of depression, anxiety and stress among the school students and addictive behavior scale, including physical, social, cultural and economical &

Psychological effects of prolonged internet usage at $p < 0.01$.

Recommendation:

Based on the findings of the present study, the following recommendations are suggested

- 1- The importance of implementing the developed prevention program of internet addiction on all school students in all schools.
- 2- Providing remedial programs for students addict the internet aims to rid them of their addiction to the internet and problems arising from excessive use of it such as depression, anxiety and stress.
- 3- Awareness programs for students to learn about health and encourage them to make a change in their personal use of the internet, therefore, it includes providing information, motivation, and persuasion to make changes and equipping them with the skills and confidence necessary to take action to improve their physical, psychological and social health.
- 4- Further researcher about planning an educational program for students at different age group to help them deal with this phenomenon. This program will include information about internet addiction, and psychological problems.

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