

## Internet Addiction: A comparative Study between Faculty of Nursing Students at Damanhour and Alexandria University

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### Abstract:

**Background:** Worldwide, the number of internet users is dramatically increasing. The internet does pose some serious problems including; information divide, information pollution, and information insecurities as well as internet addiction. **Aim of the study:** Assess the prevalence of internet addiction among nursing students in Damanhour and Alexandria University, and compare between Internet addiction level among nursing students in Damanhour and Alexandria University. **Subjects& Methods: Research design:** A descriptive comparative research design was used. **Setting:** The study was carried out in Faculty of Nursing, Alexandria and Damanhour University. **Subjects:** A 600 students were included in the study, 300 students from each University. **Tools of data collection:** Three tools were used for data collection. The first tool was Socio-demographic and Health Status Structured Interview Questionnaire for the Students. The second tool was Computer and Internet Use Assessment Questionnaire for the Students. The third tool was Young's Internet Addiction Test. **Results:** The present study revealed that 57.8% of the students have mild internet addiction followed by 17.7% who have moderate internet addiction, and 2.2% of the students have severe internet addiction. There is a significant relation between level of internet addiction and student's age, sex, the availability of laptop or PC and internet access at home, using of phone for internet access, hours of using the internet, and scholastic achievement. The student complains of headache, blurred vision, low back pain, neck pain, shoulder pain, and finger numbness. **Conclusion:** Around sixty percent of the students have mild internet addiction and the minority of them has severe internet addiction. Male students were prone to internet addiction than female. **Recommendations:** Establish a special unit for counseling about internet addiction and developing hotline services to guide youth in the diagnostic criteria and management.

**Keywords:** Internet addiction, Youth, Internet users, Nursing students, Damanhour and Alexandria University.

### Introduction

Worldwide, the number of internet users is dramatically increasing, where the internet is utilized for social networking, recreational, business, and academic purposes. However, in spite of its merits, the internet does pose some serious problems including; information divide, information pollution, such as pornographic and information insecurities as well as internet addiction <sup>(1)</sup>.

Some online users are becoming addicted to the internet in the same way that others become addicted to drugs or alcohol. This results in academic, social, and occupational impairment. Internet addiction (IA) is a new disorder described in 1996 by the psychologist Kimberly Young <sup>(2)</sup>. In the

scientific literature, several terms have been proposed to describe pathological internet use: internet addiction, cyberspace addiction, internet addiction disorder, online addiction, net addiction, internet addicted disorder, pathological internet use, high internet dependency, and problematic internet use <sup>(3)</sup>.

The internet attraction has caused the youth, especially university students, to spend most of their time on it. This companionship, and excessive use of the Internet, can distance the youth from their society and peers. Hence, isolate them and reduce their mental health <sup>(4)</sup>. Consequently, students encountered obstacles in their studies, sleep, and completing their assignments as well. This problem can also influence their

academic performance indirectly <sup>(5)</sup>. Furthermore, <sup>(6)</sup> had found a positive correlation between internet addiction and depression <sup>(6)</sup>.

Three factors are believed to lead to such addiction. Namely, personal, social and internet related factors. **Firstly**, personal factors such as low self-efficacy, introspective characteristics, impulsive behaviors, and the lack of communication skills. **Secondly**, social factors such as weak family support which may create an atmosphere which is conducive to internet addiction. **Thirdly**, internet related factors such as longer Internet usage time, easier internet access, and superior internet skills can lead to addiction <sup>(1)</sup>.

The number of internet users in Egypt is estimated at about 13 million, according to available 2009 statistics. That is to say almost two out of eight citizens go to the Internet for information, business and personal usage. This is an increase of almost threefold compared to 2005. It means, for example, that the number of daily internet users in Egypt is much higher than that of newspaper readers. These numbers are expected to rise to cover more than 50% of Egypt's population in the coming ten years <sup>(7)</sup>. Furthermore, the Survey of Young People in Egypt <sup>(8)</sup> documented that 7.5% of young people in Egypt uses the internet. Among those young people who do, they use it primarily for general knowledge and social networking purposes <sup>(8)</sup>.

The warning signs of Internet Addiction include: preoccupation with the Internet, use of the Internet in increasing amounts of time in order to achieve satisfaction, repeated unsuccessful efforts to control cut back or stop Internet use, feeling of (restlessness, moodiness, depression, or irritability). Attempting to cut down the Internet use on-line longer than originally intended, Jeopardized or risked loss of significant (relationships, job, educational or career opportunities) because of Internet use, lies to (family members, therapists, or

others) to conceal the extent of involvement with the Internet. Finally, the use of the internet is a way to escape from problems or to relieve feelings of (hopelessness, guilt, anxiety, depression) <sup>(9)</sup>.

To accurately measure the level of Internet addiction, Internet Addiction Test (IAT) is used as a reliable and valid measure of addictive use of internet. IAT was developed by <sup>(10)</sup>. It consists of 20 items that measures mild, moderate and severe level of Internet Addiction. The higher score indicates the greater level of addiction that causing significant problems in the life <sup>(10)</sup>.

Nurses continually interact with clients who may have internet addiction related problems so that, nursing assessment should include instruments to assess internet addiction disorders in order to guide on the evaluation and treatment of internet addiction disorders. So that, they must be free from addiction to be able to help and guide others on treatment and preventive measures <sup>(11)</sup>.

### Significance of the study

Internet addiction results in personal, family, academic, financial, and occupational problems that are characteristic of other addictions. Impairments of real life relationships are disrupted as a result of excessive use of the Internet. Individuals suffering from Internet addiction spend more time in solitary seclusion, spend less time with real people in their lives, and are often viewed as socially awkward. Arguments may result due to the volume of time spent on-line. Those suffering from Internet addiction may attempt to conceal the amount of time spent on-line, which results in distrust and the disturbance of quality in once stable relationships <sup>(9)</sup>. All of these problems will interfere with the nurse's work, so that the current study focusing on assessment of the prevalence of internet addiction among nursing students, since the first step in

management is to determine if there is a problem in order to provide appropriate guidance to control this type of addiction. So, the future nurse can provide effective preventive measures for internet addiction.

#### **Aim of the study**

##### **The study aimed to:**

- Assess the prevalence of internet addiction among nursing students in Damanhour and Alexandria University.
- Compare between Internet addiction level among nursing students in Damanhour and Alexandria University.

##### **Research questions:**

- What is the prevalence of internet addiction among nursing students in Damanhour and Alexandria University?
- What are the differences between the factors associated with internet addiction among nursing students in Damanhour and Alexandria University?

#### **Subjects and Methods:**

##### **Research design:**

A descriptive comparative research design was used to carry out the study.

##### **Study setting:**

The study was carried out in Faculty of Nursing - Damanhour University and Faculty of Nursing - Alexandria University.

##### **Study subjects:**

The target population for this research was nursing students who were studying in the above mentioned settings during the academic year (2014-2015).

According to Epi Info 7 sample size estimation program using the following parameters: population size: The number of eligible students registered in the Faculty of Nursing Alexandria University during the academic year 2014-2015 was 1360 students, and 1191 students at Faculty of Nursing Damanhour University. The expected frequency used was 50% with 5% margin of error, while the confidence coefficient was 95%. So

the minimum sample size accepted was 300 students from Alexandria University and 291 students from Damanhour University.

The total sample size was 600 students (300 student from each faculty). By using the equal allocation method 75 students were selected randomly from each academic year to be included in the study.

##### **Tools of data collection:**

In order to collect the necessary data for the study, three tools were used.

##### **Tool I: Socio-demographic and Health Status Structured Interview**

**Questionnaire for the Students:** This was developed by the researchers after reviewing recent literature to collect necessary data from the students; it included the following parts; **Part I:** student's socio-demographic characteristics (age, marital status, and level of education). **Part II:** Health status of the student (presence of neck pain, shoulder pain, numbness of fingers, low back pain, headache, and blurred vision, in addition to, students' weight and height).

##### **Tool II: Computer and Internet Use Assessment Questionnaire for the Students:**

This was developed by the researchers after reviewing recent literature to assess the students' use for computer and internet; it included the following parts ; **Part I:** Availability of computer at home, use of computer or cellular phone to access the internet, years of experience in accessing the internet and number of hours using it per day, **Part II:** Reasons for using the internet (academic and professional use, recreational use as playing games and watching YouTube, social reasons, and cybersex), **Part III:** The students' opinion regarding the advantages and disadvantages of using the internet.

##### **Tool III: Young's Internet Addiction Test (IAT)<sup>(10)</sup>:**

Young's Internet Addiction Test (IAT) was developed by Kimberly Young in 1998. It was adopted to evaluate the respondents' level of

Internet addiction. It is a 20-item questionnaire that uses a 6-point Likert scale. Reliability test for Young's Internet Addiction Test was done, using Cronbach's alpha that measured the degree of reliability. It showed high reliability of the total score of the test, Alpha = 0.899. According to Young's Internet Addiction Test (IAT) each student asked to respond to 20 statements by using a 6-point Likert self-rating scale which ranged from (0) never use to (5) always use. The total IAT score ranged from 0 to 100 points, it was divided into four levels according to the following; no addiction (0 -19), mild addiction (20-49), moderate addiction (50 - 79), severe addiction (80 -100).

#### **Scoring System:**

#### **Young's Internet Addiction Test (IAT) scoring system**

- Each student asked to respond to 20 statements by using a 6-point Likert self-rating scale which ranged from (0) never use to (5) always use.
- The total IAT score ranged from 0 to 100 points, it was divided into four levels according to the following; no addiction (0 -19 point), mild addiction (20-49 point), moderate addiction (50 - 79 point), severe addiction (80 -100 point).

#### **Content validity and reliability :**

- After reviewing the recent literature tool I and tool II was developed by the researchers. It was validated by juries of five experts in the field of community health nursing and nursing education. Their suggestion and recommendations were taken into consideration.
- **Field work:**
- Data were collected by the researchers over a period of four months from February 2015 to May 2015.
- The level of significance selected for this study was p value equal to or less than 0.05.
- **Pilot study:**
- A pilot study was carried out on 60 students in order to ascertain the relevance, clarity and applicability

of the tools, test wording of the questions and estimate the time required for filling the questionnaire. Based on the obtained results, the necessary modifications were done.

#### **Ethical considerations**

- Informed oral consent was obtained from all students after providing an appropriate explanation about the purpose of the study and nature of the research.
- The confidentiality and anonymity of individual responses, volunteer participation and right to refuse participating in the study were emphasized to the students.

#### **Statistical analysis:**

The collected data were coded and analyzed using PC with the Statistical Package for Social Sciences (SPSS version 11.5) and tabulated frequency and percentages were calculated.

#### **RESULTS**

**Table (1)** shows that the student's age ranged from 19 to 22 years and more with a mean of  $20.7 \pm 0.97$  years. A statistical significant difference was found between male and female. The majority of the students in Alexandria and Damanhour University were single (95%, 92.3%, respectively) with no statistically significant differences. In relation to academic year, it was observed that more than one quarter (27.9) of the female student in Alexandria University was in 2<sup>nd</sup> academic year, compared to 30.4 of the male students in Damanhour University.

**Table (2)** portrays the students' health status. They complain of many health problems, where around sixty percent of the students in Alexandria and Damanhour University complains of headache (58.7% for both). It was reported by around two thirds of the female students in Damanhour, and Alexandria University (66.8%, 66.4% respectively). Blurred vision was reported by around half of the students at both universities with the same percentage (47.7%), and it was reported by around half of the female

students in Damanhour and Alexandria University (53.4%, 50.4% respectively). The table also shows that, around one third of the students in Alexandria and Damanhour University were suffering from low back pain (35%, 33% respectively). Moreover, around one quarter of the students in Alexandria and Damanhour University complains of neck pain, shoulder pain, and finger numbness (25%, 23.3%, 20.3% and 20.3%, 20.7%, 21% respectively). No statistically significant differences were observed between the University and health complains.

Finally, according to Body Mass Index (BMI) classifications, few percentages of the students in Alexandria and Damanhour University were underweight (4.3%, 3.7%, respectively), while around two thirds (61.7%) of the students at both universities were within average weight. Additionally, overweight was observed among around thirty percent of the students in Damanhour and Alexandria University (29.3%, 27.7%). And the minority of the students in Alexandria and Damanhour University were obese (6.3%, 5.3% respectively). No statistically significant differences were observed between the University and BMI.

**Table (3)** reveals that, more than three quarters of the students in Alexandria and Damanhour University were having a laptop or PC at their homes (83%, 81.7% respectively), with no statistically significant differences. Among those who have an internet access at their home, less than three quarters of the students in Alexandria and Damanhour University have access to the internet (71%, 70% respectively). More than eighty percent of the students in Alexandria and Damanhour University have a smart phone (82.7%, 80.7% respectively). Regarding to use of smart phone for internet access, the majority of the students in Damanhour and Alexandria University reported that they use it for internet access (94.2%, 92.7% respectively). In relation to the

number of years of experience in accessing the internet, the table shows that, it ranged from less than 5 years to 15 years with a mean of  $3.4 \pm 2.3$  years. And regarding hours of using the internet per day it ranged from less than five hours to fifteen hours and more a day with a mean of  $4.02 \pm 3.8$  hours.

Concerning to the purpose of using the internet the table also reveals that, more than three quarters of the students in Alexandria and Damanhour University reported that they use the internet as a social media (83%, 79.3% respectively). This finding was reported by the majority of male students in Alexandria and Damanhour University (91.9%, 91.3% respectively). Also, around half of the male students in Alexandria and Damanhour University reported that they use internet for playing games and attending YouTube (45.9%, 45.7% and 59.5%, 56.5% respectively) with no statistically significant differences. Surprisingly to find that, around one fifth (19.6%) of the male students in Damanhour University used the internet for cybersex, compared to 4.1% of those in Alexandria. With a statistical significant difference ( $\chi^2$ : 7.215, p value: 0.007). Around sixty percent of the students in Damanhour and Alexandria University were using the internet for academic purposes (64.3%, 58.3% respectively).

**Table (3)** also reveals that, more than eighty percent of the students in Damanhour and Alexandria University have had a Facebook account and or email address (86.3%, 84% respectively). Finally, the table shows the effect of the internet advertising on the students' acceptance of it, where around three quarters of the students in Damanhour and Alexandria University stated that these advertisements raise their curiosity to follow it. Especially IQ Test advertisement that reported by 66.5% and 65.3% of the students in Damanhour and Alexandria University respectively. It sadly to find that, 12%

of male students in Damanhour University follow sex advertisements, compared to 7.7% of those in Alexandria. Lastly, only around one tenth of the students in Damanhour and Alexandria University rejected these advertisements (10% and 15.6%, respectively), with a statistically significant difference between the Universities and acceptance of advertisements ( $\chi^2$ : 8.137, p value: 0.043).

Regarding the positive effects of the internet use **Table (4)** shows that, around seventy percent of the students in Damanhour and Alexandria University reported that, the internet improves social relations (71.3% and 70.7% respectively), while around one third of the students in Damanhour and Alexandria University stated that it leads to psychological satisfaction (36% and 30% respectively). Where, more than half of the students in Alexandria and Damanhour University reported that the internet improves the school performance (55.7% and 55% respectively). The minority of the students in Damanhour and Alexandria University reported that it leads to sexual satisfaction (4% and 1.7% respectively). No statistical significant differences were found.

The table also highlights the negative effects of using the internet, where the majority of the students in Damanhour and Alexandria University reported that it wastes the time (88.3% and 85.7% respectively), around half of the students in Damanhour and Alexandria University conveyed that, the internet decrease the scholastic achievement and affects on family relations (51%, 50.7% and 51%, 45% respectively). Moreover, around one third of Damanhour and Alexandria University reported that it causes health problems (36%, 32.7% respectively). Finally, around one tenth of the students in Damanhour and Alexandria University revealed that, the internet affects on the personality negatively (11.7%, 8% respectively).

No statistical significant differences were found.

**Table (5)** reveals that, only slightly more than a quarter of the students in Damanhour and Alexandria University were satisfied by their academic performance (27%, 24.7% respectively) with no statistically significant differences.

**Figure (1)** portrays that, according to the Internet Addiction Test (IAT) total score, around sixty percent (57.8%) of the students have mild internet addiction followed by less than one fifth (17.7%) who have moderate internet addiction, and the minority (2.2%) of the students have severe internet addiction with a mean score of  $35.23 \pm 20.15$ .

**Table (6)** conveyed that, there is a significant relation between student's age and level of internet addiction ( $\chi^2$ : 34.991, p value: < 0.001). Regarding to sex, more than sixty percent (61.5%) of those who have severe internet addiction was male, a statistical significant relation was observed between sex and level of internet addiction ( $\chi^2$ : 18.522, p value: < 0.001). Additionally, all of those who have severe internet addiction was single with no statistically significant relation was found between marital status and level of internet addiction.

**Table (7)** shows that, the majority (92.3%) of the students who have severe internet addiction was reported that they have headache with a statistically significant relation between headache and level of internet addiction (FET: 7.241, p value: 0.045). Moreover, 30.8% of those who have severe internet addiction reported that they complains of neck pain, low back pain and blurred vision with the same percentage. Finally, around one quarter (23.1%) of those who have severe internet addiction was obese, while 15.4% was overweight. No significant relation was noticed between BMI and the level of internet addiction.

**Table (8)** portrays that, more than three quarters (76.9%) of those

who have severe internet addiction have a laptop or PC and internet access at their home with the same percentage. A statistical significant relation was observed between the availability of laptop or PC and internet access at home and the level of internet addiction (FET: 21.942, p value: < 0.001, FET: 42.690, p value: < 0.001 respectively). All of the students who have severe internet addiction were using their phone for internet access with a statistically significant relation (FET: 21.819, p value: 0.001). Furthermore, the majority (93.2%) of those who have severe internet addiction used the internet for less than ten years ago. A statistical significant relation was observed between level of internet addiction and years of experience in accessing the internet (FET: 56.833, p value: < 0.001). Finally, more than two thirds (69.2%) of those who have severe internet addiction was using the internet for 15 hours and more per day. A statistical significant relation was observed between level of internet addiction and hours of using the internet (FET: 162.633, p value: < 0.001).

**Table (9)** shows that, slightly less than two thirds (61.5%) of the students who have severe internet addiction were dissatisfied by their scholastic achievement. A statistical significant relation was observed between level of internet addiction and scholastic achievement (FET: 34.462, p value: < 0.001).

## DISCUSSION

The internet is considered as the most effective tool in all areas of science, business, education, culture, and politics Christakis <sup>(12)</sup>. Young people are generally believed to constitute the majority of Internet users. An increasing number of studies have revealed that some youngsters are compulsive in their use of the Internet and exhibit addictive behaviors very similar to those related to alcoholism, substance addiction and pathological gambling Ha et al & Petry <sup>(13,14)</sup>.

The findings of the current study revealed that, around sixty percent of the students have mild internet addiction followed by less than one fifth who has moderate internet addiction, and the minority of the students has severe internet addiction. With a mean score of 35.23±20.15. The same was acknowledged by different studies, where the prevalence of Internet addiction in university students has been reported to be 10.6% in China, and 17.9% in Taiwan, and 34.7% in Greece Wu, Chou & Frangos <sup>(15-17)</sup>. Gender is related to internet addiction, the results of the current study showed that more than sixty percent of those who have severe internet addiction were male, a statistical significant relation was observed between sex and level of internet addiction. This is in line with the findings of a study done by Alhajjar <sup>(18)</sup> who reported that male nursing students had higher means of the Internet Addiction Test than female. The same findings were reported by Lam et al, Qin & Sharma <sup>(19-21)</sup>.

More than three quarters of the students in Alexandria and Damanhour University were having a laptop or PC at their homes (83%, 81.7% respectively). Among those who have an internet access at their home, less than three quarters of the students in Alexandria and Damanhour University have access to the internet (71%, 70% respectively). Sargin <sup>(22)</sup> added that those males who have computers at home are more liable to be internet addicts.

Moreover, as computing and Internet technology have evolved, many people have started accessing the Internet via "smart-phones," or cellular telephones. They use phones to browse the Web, e-mail, use maps, play games, and access social networking sites, download applications <sup>(23)</sup>. In Europe (2012) between 35 and 40% of internet users access the internet using smart-phone European Digital Agenda <sup>(24)</sup>. These findings in line with the current study

findings, where the majority of the students in Damanhour and Alexandria University use their smart-phone for internet access (94.2%, 92.7% respectively). Additionally, it was observed that, all of the students who have severe internet addiction were using their phone for internet access with a statistically significant relation (FET: 21.819, p value: 0.001). This finding sheds the light on the issue of smart-phone addiction that might affect youth negatively.

In fact, years of experience in accessing the internet and the time spent online interfere with the level of internet addiction among internet users Wanajak<sup>(25)</sup>. The current study revealed a statistical significant relation between level of internet addiction and years of experience in accessing the internet (FET: 56.833, p value: < 0.001). Also, there is a statistical significant relation was observed between level of internet addiction and hours of using the internet (FET: 162.633, p value: (0.001). In this regards, a study of SookYoo et al & Wang<sup>(26, 27)</sup> confirmed that those who spent more than 4 hours a day on-line had a higher probability of developing internet addiction than those who spent less than 2 hours a day on-line.

Sometimes, internet users were using the internet for recreational purposes as they use it for playing games; inspite of that playing online games increased the risk of being addicted to the internet Kuss & Hall<sup>(28,29)</sup>, around half of the male students in Alexandria and Damanhour University use internet for playing games and attending YouTube. Controversy the positive and negative impacts of the internet and computer use has received considerable attention recently Yang & Tung<sup>(30)</sup>. The most common use of the Internet was for entertainment, followed by communication with classmates and learning Wang<sup>(27)</sup>, these findings in line with the present study, where around sixty percent of the students in Damanhour and Alexandria University

were using the internet for academic purposes.

Additionally, the current study revealed that around seventy percent of the students in Damanhour and Alexandria University reported that, the internet improves social relations. In contrast Qin ,Wang, Mohammad et al & Brian,<sup>(20, 27,31,32)</sup> declared that compulsive use of the Internet are often associated with increased social isolation, increased clinical depression, familial conflict, divorce, academic failure and if these problems become chronic; it may lead to psychological problem. Additionally, around one tenth of the students in Damanhour and Alexandria University revealed that the internet affects on the personality negatively, the majority of the students in Damanhour and Alexandria University reported that it wastes the time, also, around half of the students in Damanhour and Alexandria University conveyed that, the internet decreases the scholastic achievement and affects on family relations. And around one third of Damanhour and Alexandria University reported that it causes health problems (36%, 32.7% respectively). The main health problems reported by the students in the current study includes headache, blurred vision, low back pain, neck pain, shoulder pain, and finger numbness. It may be attributed to computer and internet use.

## CONCLUSION

The findings of the present study revealed that, around sixty percent of the students have mild internet addiction and the minority of them has severe internet addiction. Male students were prone to internet addiction than female.

## RECOMMENDATIONS

Based on the results of the present study, the following recommendations are recommended:

- 1- Establishing a special unit for counseling about internet addiction within the University health insurance clinics and family health centers.



- 2- Developing hotline services for internet addicts to guide youth in the diagnostic criteria for internet addiction and management.
- 3- Developing comprehensive coordination and cooperation protocol among Alexandria Health Directorate, Alexandria University, NGOs, and other different sectors of the community to raise community awareness about internet addiction and its consequences.
- 4- Use internet addiction test at schools and universities in line with health appraisal process.
- 5- Encouraging the mass media to highlight internet addiction among youth.
- 6- Further researches on smart-phone addiction are needed.

**Table (1) Distribution of the students According to Their Socio-demographic Characteristics**

Characteristics	University												Test of significance
	Damanhour						Alexandria						
	Male n(92)		Female n(208)		Total n(300)		Male n(74)		Female n(226)		Total n(300)		
No	%	No	%	No	%	No	%	No	%	No	%		
Age (years)													
- 19	20	21.7	34	16.3	54	18	7	9.6	27	11.9	34	11.3	$\chi^2$ (33.944) P( <0.001)*
- 20	9	9.8	29	13.9	38	12.7	20	27	70	31	90	30	
- 21	39	42.4	82	39.4	121	40.3	36	48.6	87	38.5	123	41	
- 22 and more	24	26.1	63	30.3	87	29	11	14.9	42	18.6	53	17.7	
Mean $\pm$ SD	20.7 $\pm$ 0.97 years												
Marital status													
- Single	88	95.7	189	90.9	277	92.3	72	97.3	213	94.2	285	95	$\chi^2$ (1.798) P( 0.180)
- Married	4	4.3	19	9.1	23	7.7	2	2.7	13	5.8	15	5	
Academic year													
- 1 <sup>st</sup> year	26	28.3	49	23.6	75	25	20	27	55	24.3	75	25	-----
- 2 <sup>nd</sup> year	28	30.4	47	22.6	75	25	12	16.2	63	27.9	75	25	
- 3 <sup>rd</sup> year	20	21.7	55	26.4	75	25	17	23	58	25.7	75	25	
- 4 <sup>th</sup> year	18	19.6	57	27.4	75	25	25	33.8	50	22.1	75	25	

\*Significant at P&lt;0.05

**Table (2) Distribution of the students According to Their Health Status**

Health status	University												Test of significance
	Damanhour						Alexandria						
	Male n( 92)		Female n(208)		Total n(300)		Male n(74)		Female n( 226)		Total n(300)		
No	%	No	%	No	%	No	%	No	%	No	%		
Present health complains #													
- Headache	37	40.2	139	66.8	176	58.7	26	35.1	150	66.4	176	58.7	$\chi^2$ (0.000) P(1.000)
- Blurred vision	32	34.8	111	53.4	143	47.7	29	39.2	114	50.4	143	47.7	
- Low back pain	27	29.3	73	35.1	100	33.3	23	31.1	82	36.3	105	35	$\chi^2$ (0.185) P(0.667)
- Neck pain	17	18.5	44	21.2	61	20.3	16	21.6	59	26.1	75	25	
- Shoulder pain	16	17.4	46	22.1	62	20.7	14	18.9	56	24.8	70	23.3	$\chi^2$ (1.864) P(0.172)
- Finger numbness	15	16.3	48	23.1	63	21	15	20.3	46	20.4	61	20.3	
BMI													
- Underweight	0	0	11	5.3	11	3.7	2	2.7	11	4.9	13	4.3	$\chi^2$ (0.570) P(0.903)
- Average weight	66	71.7	119	57.2	185	61.7	51	68.9	134	59.3	185	61.7	
- Overweight	24	26.1	64	30.8	88	29.3	17	23	66	29.2	83	27.7	
- Obese	2	2.2	14	6.7	16	5.3	4	5.4	15	6.6	19	6.3	

\*Significant at P&lt;0.05

#: Multiple responses

**Table (3) Distribution of the Students According to Their Use for Computer**

Computer use	University												Test of significance
	Damanhour						Alexandria						
	Male n( 92)		Female n(208)		Total n(300)		Male n(74)		Female n( 226)		Total n(300)		
No	%	No	%	No	%	No	%	No	%	No	%		
Have a laptop / PC at home													
- Yes	81	88	164	78.8	245	81.7	64	86.5	185	81.9	249	83	$\chi^2$ (0.183) P(0.669)
- No	11	12	44	21.2	55	18.3	10	13.5	41	18.1	51	17	
Have an internet access at home													$\chi^2$ (0.072) P(0.788)
- Yes	69	75	141	67.8	210	70	56	75.7	157	69.5	213	71	
- No	23	25	67	32.2	90	30	18	24.3	69	30.5	87	29	
Have a smart phone													$\chi^2$ (0.401) P(0.527)
- Yes	85	92.4	157	75.5	242	80.7	70	94.6	178	78.8	248	82.7	
- No	7	7.6	51	24.5	58	19.3	4	5.4	48	21.2	52	17.3	
Use of smart phone for internet access	n(85)		n(157)		n(242)		n(70)		n(178)		n(248)		$\chi^2$ (0.836) P(0.658)
- Yes	83	97.6	145	92.4	228	94.2	69	98.	161	90.4	230	92.7	
- No	2	2.4	12	7.6	14	5.8	1	1.4	17	9.6	18	7.3	
Years of experience in accessing the internet	n( 92)		n(208)		n(300)		n(74)		n( 226)		n(300)		
- <5	42	45.7	155	74.5	197	65.7	39	52.7	179	79.2	218	72.7	$\chi^2$ (4.4047) P(0.256)
- 5>10	39	42.4	39	18.8	78	26	30	40.	36	15.9	66	22	
- 10 – 15	9	9.8	0	0	9	3	5	6.8	1	0.4	6	2	
- Don't remember	2	2.2	14	6.7	16	5.3	0	0	10	4.4	10	3.3	
Mean ± SD	3.4±2.3 year												
Hours of use computer / day													
- <5	60	65.2	141	67.8	201	67	48	64.9	169	74.8	217	72.3	FET (4.492) P(0.353)
- 5>10	23	25	45	21.6	68	22.7	18	24.3	35	15.5	53	17.7	
- 10 >15	2	2.2	2	1	4	1.3	2	2.7	1	0.4	3	1	
- 15 and more	5	5.4	6	2.9	11	3.7	6	8.1	10	4.4	16	5.3	
- Don't remember	2	2.2	14	6.7	16	5.3	0	0	11	4.9	11	3.7	
Mean ± SD	4.02±3.8 hours												
Internet uses purposes #													
- Game	42	45.7	58	27.9	100	33.3	34	45.9	50	22.1	84	28	$\chi^2$ (2.007) P(0.127)
- Academic use	53	57.6	140	67.	193	64.3	38	51.4	137	60.6	175	58.3	$\chi^2$ (2.277) P(0.131)
- Social media	84	91.3	154	74	238	79.3	68	91.9	181	80.1	249	83	$\chi^2$ (1.319) P(0.251)
- Attend YouTube	52	56.5	77	37	129	43	44	59.5	91	40.3	135	45	$\chi^2$ (0.244) P(6.22)
- Cyber sex	18	19.6	6	2.9	24	8	3	4.1	6	2.7	9	3	$\chi^2$ (7.215) P(0.007)*

Computer use	University												Test of significance
	Damanhour						Alexandria						
	Male n( 92)		Female n(208)		Total n(300)		Male n(74)		Female n( 226)		Total n(300)		
	No	%	No	%	No	%	No	%	No	%	No	%	
Have Facebook account / e-mail address													
- Yes	90	97.8	169	81.3	259	86.3	72	97.3	180	79.6	252	84	$\chi^2$ (0.646) P(0.421)
- No	2	2.2	39	18.8	41	13.7	2	2.7	46	20.4	48	16	
Age when have a Facebook account or e-mail address	n(90)		n(169)		n(259)		n(72)		n(180)		n(252)		
- <10	3	3.3	0	0	3	1.2	1	1.4	1	0.6	2	0.8	FET(4.321) P(0.359)
- 10>15	13	14.4	9	5.3	22	8.5	5	6.9	8	4.4	13	5.2	
- 15 and more	73	81.1	159	94.1	232	89.6	64	88.9	168	93.3	232	92.1	
- Don't remember	1	1.1	1	0.6	2	0.8	2	0.3	3	1.7	5	1.9	
Mean ± SD	17.7±2.4 years												
Did the internet advertisement raise the curiosity of the student?	n(92)		n(208)		n(300)		n(74)		n(226)		n(300)		
- Yes	75	81.5	144	69.2	219	73	52	70.3	160	70.8	212	70.7	$\chi^2$ (0.404) P(0.525)
- No	17	18.5	64	30.8	81	27	22	29.7	66	29.2	88	29.3	
Types of advertisement that raise the curiosity of the students#	n(75)		n(144)		n(219)		n(52)		n(160)		n(212)		
- Game advertisement	27	36	35	24.3	62	28.3	18	34.6	28	17.5	46	21.7	$\chi^2$ (2.911) P(0.233)
- Shopping advertisement	27	36	61	42.4	88	40.2	20	38.5	68	42.5	88	41.5	
- IQ Test advertisement	48	64	95	65.9	143	65.3	35	67.3	106	66.3	141	66.5	$\chi^2$ (0.474) P(0.789)
- Sex advertisement	9	12	5	3.5	14	6.4	4	7.7	3	1.9	7	3.3	
Opinion about the advertisements													
- Accept it	54	72	122	84.7	176	80.4	40	76.9	130	81.3	170	80.2	$\chi^2$ (8.137) P(0.043)*
- Reject it	8	10.7	14	9.7	22	10	8	15.4	25	15.6	33	15.6	
- Don't know	13	17.3	9	6.3	22	10	4	7.7	5	3.1	9	4.2	

\*Significant at P&lt;0.05

#: Multiple responses

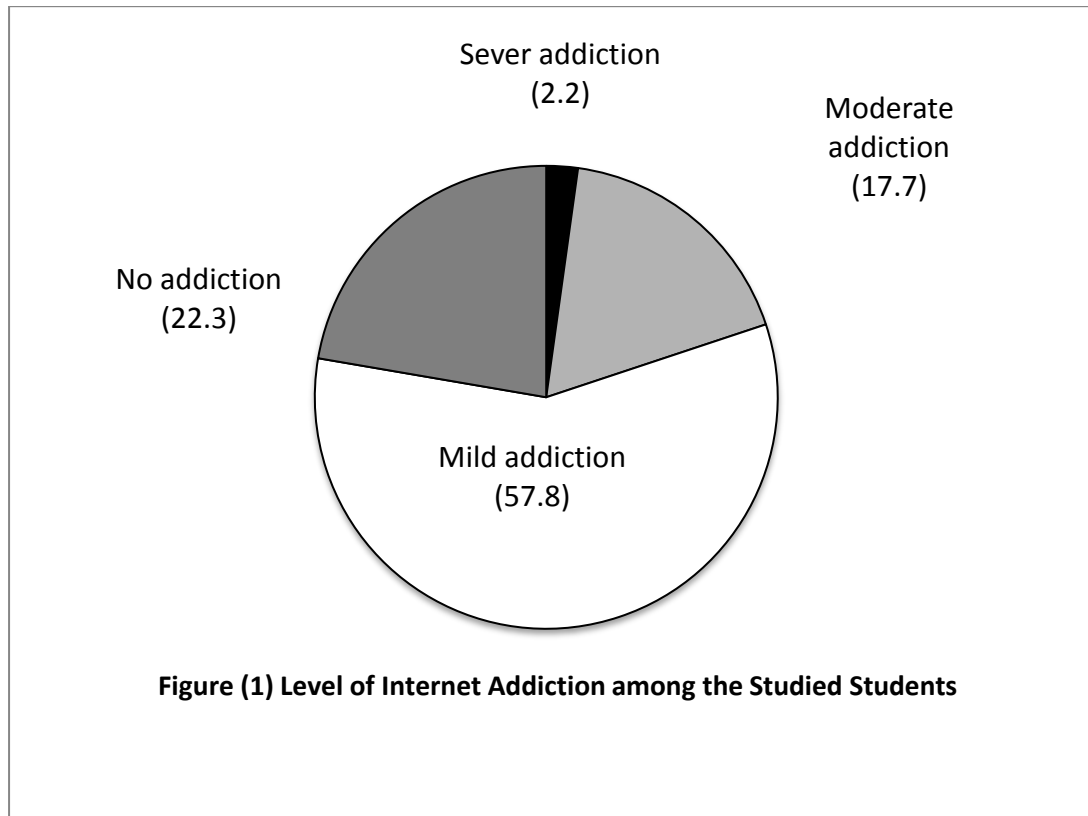
**Table (4) Distribution of the students according to Their opinion about the Positive and Negative Effects of Internet Use**

Effects of the internet	University												Test of significance
	Damanhour						Alexandria						
	Male n( 92)		Female n(208)		Total n(300)		Male n(74)		Female n( 226)		Total n(300)		
	No	%	No	%	No	%	No	%	No	%	No	%	
The positive effects of using internet #													
- It improves scholastic achievement	49	53.3	116	55.8	165	55	46	62.2	121	53.5	167	55.7	$\chi^2$ (0.027) P(0.870)
- It improves social relations	69	75	145	69.7	214	71.3	54	73	158	69.9	212	70.7	$\chi^2$ (0.032) P(0.857)
- It leads to psychological satisfaction	36	39.1	72	43.6	108	36	30	40.5	60	26.5	90	30	$\chi^2$ (2.442) P(0.118)
- It leads to sexual satisfaction	9	9.8	3	1.4	12	4	3	4.1	2	0.9	5	1.7	$\chi^2$ (2.966) P(0.085)
- It improves general knowledge	5	5.4	13	6.3	18	6	6	8.1	8	3.5	14	4.7	$\chi^2$ (0.528) P(0.467)
The negative effects of using internet #													
- It wastes time	78	84.8	187	89.9	265	88.3	56	75.4	201	88.9	257	85.7	$\chi^2$ (0.943) P(0.331)
- It decreases scholastic achievement	51	55.4	102	49	153	51	44	59.5	108	47.8	152	50.7	$\chi^2$ (0.007) P(0.935)
- It affects on family relations	46	50	107	51.4	153	51	37	50	98	43.4	135	45	$\chi^2$ (2.163) P(0.141)
- It causes health problems	30	32.6	78	37.5	108	36	29	39.2	69	30.5	98	32.7	$\chi^2$ (0.739) P(0.390)
- It affects on personality negatively	9	9.8	26	12.5	35	11.7	7	9.5	17	7.5	24	8	$\chi^2$ (2.275) P(0.132)
<b>*Significant at P&lt;0.05</b>						<b>#: Multiple responses</b>							

**Table (5) Distribution of the students According to Their Satisfaction by Their Academic Performance**

Satisfaction by their academic performance	University												Test of significance
	Damanhour						Alexandria						
	Male n( 92)		Female n(208)		Total n(300)		Male n(74)		Female n( 226)		Total n(300)		
	No	%	No	%	No	%	No	%	No	%	No	%	
Students' satisfaction by their academic performance													
- Satisfied	22	23.9	59	28.4	81	27	17	23	57	25.2	74	24.7	χ <sup>2</sup> (0.825) P(0.662)
- Dissatisfied	26	28.3	44	21.2	70	23.3	20	27	46	20.4	66	22	
- To some extent satisfied	44	47.8	105	50.5	149	49.7	37	50	123	54.4	160	53.3	

**\*Significant at P<0.05**



**Figure (1) Level of Internet Addiction among the Studied Students**

**Table (6) Relation between the Student's Level of Internet Addiction and their Socio-demographic Characteristics**

Characteristics	Level of Internet Addiction								Total n(600)		Test of significance	
	No n(134)		Mild n(347)		Moderate n(106)		Severe n(13)					
	No	%	No	%	No	%	No	%	No	%		
<b>Age (years)</b>												
- 19	14	10.4	59	17	14	13.2	1	7.7	88	14.7	$\chi^2$ (34.991) P (<0.001)*	
- 20	48	35.8	63	18.2	15	14.2	2	15.4	128	21.3		
- 21	36	26.9	146	42.1	57	53.8	5	38.5	244	40.7		
- 22 and more	36	26.9	79	22.8	20	18.9	5	38.5	140	23.3		
<b>Sex</b>												
- Male	24	17.9	95	27.4	39	36.8	8	61.5	166	27.7	$\chi^2$ (18.525) P (<0.001)*	
- Female	110	82.1	252	72.6	67	63.2	5	38.5	434	72.3		
<b>Marital status</b>												
- Married	10	7.5	25	7.2	3	2.8	0	0	38	6.3	FET (3.131) P (0.323)	
- Single	124	92.5	322	92.8	103	97.2	13	100	562	93.7		
<b>Academic year</b>												
- 1 <sup>st</sup> year	31	23.1	95	27.4	22	20.8	2	15.4	150	25	FET (12.074) P (0.190)	
- 2 <sup>nd</sup> year	33	24.6	86	24.8	28	26.4	3	23.1	150	25		
- 3 <sup>rd</sup> year	44	32.8	75	21.6	25	23.6	6	46.2	150	25		
- 4 <sup>th</sup> year	26	19.4	91	26.2	31	29.2	2	15.4	150	25		

\*Significant at P&lt;0.05

**Table (7) Relation between the Student's Level of Internet Addiction and their Health Status**

Health status	Level of Internet Addiction								Total n(600)		Test of significance	
	No n(134)		Mild n(347)		Moderate n(106)		Severe n(13)					
	No	%	No	%	No	%	No	%	No	%		
<b>Present health complain</b>												
#												
- Headache	80	59.7	202	58.2	58	54.7	12	92.3	352	58.7	7.241	0.045*
- Blurred vision	68	50.7	163	47	51	48.	4	30.8	286	47.7	2.019	0.578
- Low back pain	47	35.1	122	35.2	32	30.2	4	30.8	205	34.2	0.993	0.821
- Neck pain	29	21.6	79	22.8	24	22.6	4	30.8	136	22.7	0.762	0.866
- Shoulder pain	30	22.4	78	22.5	22	20.8	2	15.4	132	22	0.324	0.967
- Finger numbness	25	18.7	73	21	25	23.6	1	7.7	124	20.7	1.931	0.581
<b>BMI</b>												
- Underweight	6	4.5	14	4	4	3.8	0	0	24	4	10.457	0.271
- Average weight	89	66.4	208	59.9	65	61.3	8	61.5	370	61.7		
- Overweight	30	22.4	109	31.4	30	28.3	2	15.4	171	28.5		
- Obese	9	6.7	16	4.6	7	6.6	3	23.1	35	5.8		

\*Significant at P&lt;0.05

#: Multiple response

**Table (8 ):Relations between the Student's Level of Internet Addiction and their Use of Computer**

Use of computer	Level of Internet Addiction								Total n(600)		Test of significance	
	No n(134)		Mild n(347)		Moderate n(106)		Severe n(13)					
	No	%	No	%	No	%	No	%	No	%	FET	P
Have a laptop / PC at home												
- Yes	92	68.7	303	87.3	89	84	10	76.9	494	82.3	21.942	<0.001*
- No	42	31.3	44	12.7	17	16	3	23.1	106	17.7		
Have an internet access at home												
- Yes	63	47	269	77.5	81	76.4	10	76.9	423	70.5	42.690	<0.001*
- No	71	53	78	22.5	25	23.6	3	23.1	177	29.5		
Use of smart phone for internet access												
- Yes	85	63.4	277	79.8	84	79.2	13	100	459	76.5	21.819	0.001*
- No	16	11.9	18	5.2	2	1.9	0	0	36	6		
- Don't have a smart phone	33	24.6	52	15	20	18.9	0	0	105	17.5		
Years of experience in accessing the internet												
- <5	92	68.7	255	73.5	61	57.5	7	53.8	415	69.2	56.833	<0.001*
- 5>10	22	16.4	84	24.2	32	30.2	6	46.2	144	24		
- 10-15	1	0.7	6	1.7	8	7.5	0	0	15	2.5		
- Don't remember	19	14.2	2	0.6	5	4.7	0	0	26	4.3		
Hours of use computer / day												
- <5	98	73.1	263	75.8	56	52.8	1	7.7	418	69.7	162.633	<0.001*
- 5>10	10	7.5	76	21.9	32	30.2	3	23.	121	20.2		
- 10>15	1	0.7	2	0.6	4	3.8	0	0	7	1.2		
- 15 and more	0	0	6	1.7	12	11.3	9	69.2	27	4.5		
- Don't remember	25	18.7	0	0	2	1.9	0	0	27	4.5		

\*Significant at P&lt;0.05

**Table (9): Relation between the Student's Level of Internet Addiction and their Satisfaction by their Academic Performance**

Students' satisfaction by their academic performance	Level of Internet Addiction								Total n(600)		Test of significance
	No n(134)		Mild n(347)		Moderate n(106)		Severe n(13)				
	No	%	No	%	No	%	No	%	No	%	
- Yes	31	23.1	105	30.3	19	17.9	0	0	155	25.8	FET (34.462) P (<0.001)*
- No	20	14.9	68	19.6	40	37.7	8	61.5	136	22.7	
- To some extent	83	61.9	174	50.1	47	44.3	5	38.5	309	51.5	

\*Significant at P&lt;0.05



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