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Internet Addiction and Quality of Life among Students at Technical Institute of Nursing, Mansoura University, Egypt

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Abstract: Internet addiction prevails among students who uncontrollably immerse themselves in it as a way of escaping from their challenges and stressors which may negatively affect their quality of life. ***Aim of this study:*** to investigate the prevalence of internet addiction and its influence on quality of life among students of the technical institute of nursing, Mansoura University**.** ***Methods*** a descriptive cross- sectional research design was used to achieve the aim of this study. The present study was conducted at the Technical Institute of Nursing, Mansoura University, Egypt, a total of 341 students were recruited after considering ethical requirements. Three tools were used to collect the needed data; the socio-demographic characteristics, Young's internet addiction test (IAS) and Quality of life questionnaire (QOL). ***Results:*** 16.1% of the sample was considered addicted to the internet and 64.0% of participants had high quality of life. A highly statistically significant strong negative correlation between internet addiction and quality of life was reported (r=0.43, P<0.001). ***Conclusion:*** improper internet use negatively affects quality of life. ***Recommendation:*** a large scale further research should be conducted on large sample to investigate internet addiction among university students.

Key words: Internet Addiction (IA), Quality of life (QOL), College Students.

BACKGROUND

According to Internet World Stats, (2017), 49.5% of the population in Egypt is using the internet. Although the beneficial uses of internet including useful information share, educational activities and social contact (Mihajlov & Vejmelka, 2017). Some countries take precautions against inappropriate internet use due to its potential threats and negative impacts on the physical, psychological, social wellbeing and quality of life. Additionally, depression, loneliness, low self-esteem, and anxiety were reported (Pontes, Szabo, & Grif, 2015).

Internet addiction (IA) can be defined as excessive and uncontrollable preoccupation with using internet which cause distress in several life domains (Dannon, 2014). Features of internet addiction tend to present when internet is used in pathological and unhealthy pattern (Griffiths & Szabo, 2013).

Personality traits increase the risk for IA as neuroticism, aggression and hostility, introversion or individual with sensation seeking. These factors predispose individual to social isolation and loneliness. So they seek to fulfill their interpersonal needs online (Kuss, Griffiths, & Binder, 2013). IA is psychological maladaptive coping mechanism used to escape from real problems and stressful situation (Huang, Li, & Tao, 2010).

Fatehi, et al., & Mirzazadeh, (2016), reported that internet addiction affects students' quality of life, relation with family and academic performance. It also impairs mental and psychological function in the form of anxiety, loneliness, depression and aggressive behavior.

When individuals escape from real life interaction and gratify their social needs online, they might suffer social isolation (Wegmann, Stodt, & Brand, 2015).This social isolation may predispose to the psychopathological appearance of depressive symptoms and social anxiety (Brand, Laier, & Young 2014). The pathological inability to control internet use negatively affects major life domains; physical, psychological, social and the environmental, this in turn may lead to poor quality of life (Cheng & Li, 2014).

Nurses have important role as, educators and counselors in improving students' overall physical, social and psychological wellbeing (Collins, 2014).

Significance of the study:

After searching the literature, no studies were conducted to investigate internet addiction among nursing students. As nursing care reflects high contact between the nurse and the patient, nurses who suffer internet addiction won't deliver quality care to patients and families.

Aim of the study:

This study aims to investigate the prevalence of internet addiction and its influence on quality of life among students of the Technical Institute of Nursing, Mansoura University, Egypt

SUBJECTS AND METHODS

Research design:

Descriptive cross-sectional correlational research design was utilized in this research.

Study setting:

This study was conducted at the Technical Institute of Nursing, Mansoura University, the institute was established in 1997. Duration of study in the institute is two years (two academic semesters/academic year). Graduates of the Technical Institute of Nursing serve as general technical nurses. The institute has four clinical labs; each lab accommodates nearly 40 students

Study subjects (participants):

Students at the technical institute of nursing from both sexes and had willingness to voluntary participate in the study were recruited. Sample consisted of 341 students; three groups were randomly chosen by rotary from the first academic year and three other groups were chosen form the second academic year (each group involved 38 students).

Tools (instruments) of Data Collection of the study:

In order to achieve the aim of the current study, the following instruments were utilized:

Tool I: socio demographic characteristics:

This tool was designed by the researcher in Arabic language and included the following data; age, gender, residence, marital status, grade in the previous academic semester, and class.

Tool II: Young's internet addiction test (IAS):

- This scale assesses internet addiction; it is composed of 60 questions developed by Young (1998). This tool categorizes internet users through using likert scale into mild, moderate, and severely addicted to internet. Participants should answer with any of the following (applied perfectly, applied to some extent, not applicable to all).
- It is translated into Arabic, validated and reliable by Ahmed, (2013a). IAS composed of six subscales as following ;

1) ***Salience:*** it indicates internet control in thoughts and emotion of users through excessive preoccupation that leads to cognitive distortion and disturbed behavior (It includes ten questions).
2) ***Mood modification:*** it refers to individuals' feelings used to avoid impacts and consequences of not using the internet (it includes ten questions).
3) ***Tolerance:*** it is the increase of internet use to achieve the same desirable effect that was achieved previously (it includes ten questions).
4) ***Withdrawal symptoms:*** it describes the physiological impacts of uncomfortable feeling that happens after sudden stoppage of internet use (it includes ten questions).
5) ***Conflict:*** it refers to internal conflicts that occur between the individual and the surrounding environment (it includes ten questions).
6) ***Relapse:*** it occurs when individual goes back to internet use in an inappropriate way (it includes ten questions).

Scoring of the tool was based on the following;

- Participant gets two points when he answers with apply perfectly.
- Participant gets one points when he answers with apply to some extent.
- Participant gets zero point when he answers with not applicable at all.

The median score of this tool is (60) points, when the student gets more than (60) points, this indicates internet addiction, student who score less than (60) points, this does not indicate internet addiction from total scoring (120) points (Ahmed, 2013a).

Tool III: Quality of life questionnaire (QOL):

- This questionnaire was developed by the WHO (1996) and assesses quality of personal life. It was translated into Arabic language by Ahmed, (2013b).
- It consists of 26 questions, two of them about general life and general health and 24 questions distributed on sub dimension as the following;

1) ***Physical health*** (it includes 7 questions).
2) ***Psychological health*** (it includes 6 questions).
3) ***Social relationship*** (it includes 3 questions).
4) ***Environment*** (it includes 8 questions).

This questionnaire is a likert scale ranging from 1 to 5, the student chooses from following; not always, with small degree, with medium degree, very much and very high degree. ≥ 50% of scoring indicate high quality of life while <50% indicates low quality of life.

Administrative process & Ethical consideration:

An approval was obtained from Research Ethical Committee, Faculty of Nursing, Mansoura University in order to accomplish the study. An official administrative approval letter was obtained from the Faculty of Nursing, Mansoura University to the director and head of Technical Institute of Nursing. Aim of the study was explained to participants before participation, confidentiality and the right to withdraw from the study at any stage was assured to them. Students were reassured that information obtained will be confidential, and will use only for purpose of the study. Consent was obtained from participants and informed that participation in the study is voluntary. Data was collected from September 2017 to end of November 2017 twice/week.

Statistical design:

All statistical analysis was performed using the Statistical Package for Social Sciences (SPSS) for windows version 20.0 (SPSS, Chicago, IL). Continuous data was expressed in mean ±standard deviation (SD). Categorical data was expressed in number and percentage. Chi-square test was used for comparison of variables with categorical data. Pearson correlation coefficient was used as the data was parametric. Statistical significance was set at $P < 0.05$.

Table 1. Socio-demographic characteristics of the students n=342.

	N	%
Age (years)		
17-19	168	49.1
20-23	174	50.9
Mean ±SD	19.5 ±0.8	
Sex		
Male	166	48.5
Female	176	51.5
Marital status		
Single	333	97.4
Married	9	2.6
Previous semester estimate		
Weak	3	.9
Accepted	40	11.7
Good	34	9.9
Very good	141	41.2
Excellent	124	36.3
Academic year		
First	114	33.3
Second	228	66.7
Residence		
Rural	299	87.4
Urban	43	12.6
Do you have a computer in home		
No	53	15.5
Yes	289	84.5
Are you a subscriber to the Internet		
No	7	2.0
Yes	335	98.0
How many hours do you use the internet		
More than two hours	190	55.6
From one hour to two hours	73	21.3
Less than one hour a day	10	2.9
Others	69	20.2

Table (1) indicates that half of the sample aged between (20-23years) with a mean age (19.5 ± 0.8). The majority of the students in the sample (97.4%) were single.

Regarding academic achievement, more than two fifth (41.2 %) scored very good grade in their previous academic semester. Additionally, (66.7%) of the students were in the second academic year while (33.3 %) were in the first academic year. Furthermore, more than three quarter of students (87.4%) were from rural area.

More than three quarter (87.4%) of students had computers at home and the majority of students (98.0) are subscribers to the internet.

Finally, students who spent more than two hours on the internet constituted more than half (55.6%) of the sample.

Table 2. Distribution of internet addiction (IA) domains among students n=342.

	Mean ±SD		<50%		≥50%	
			N	%	n	%
Salience	8.0	±3.8	322	94.2	20	5.8
Mood modification	5.1	±3.7	332	97.1	10	2.9
Tolerance	7.5	±3.8	320	93.6	22	6.4
Withdrawal symptoms	6.0	±3.5	336	98.2	6	1.8
Conflict	4.8	±3.7	336	98.2	6	1.8
Relapse	7.2	±4.2	323	94.4	19	5.6
Total score	39.0	±19.9	287	83.9	55	16.1

- **≥50%**=Addicted to internet
- **<50%**=Non addicted to internet

As shown in Table (2), 5.8 % of students scored >50% in salience while 94.2% were < 50%. 2.9% of students were >50% in mood modification while 97.1% of them were less than 50%. Regarding to tolerance 6.4% were more than 50% compared to 93.6% of students less than 50%. 1.8% of students had withdrawal symptoms were >50% while 98.2% were < 50%. Also, conflict result was matched with withdrawal symptoms. According to relapse domain 5.6% of them were >50% compared to 94.4% who were < 50%. The total score showed that overall percentage of students addicted to internet constituted 16.1% of the sample.

Table 3. Association between the internet addiction and the socio-demographic & clinical characteristics of the students.

	Not addict (n=287)		Addict (n=55)		Chi square	
	N	%	N	%	χ^2	P
Age (years)						
17 – 19	138	48.1	30	54.5		
>19	149	51.9	25	45.5	0.771	0.380
Sex						
Male	127	44.3	39	70.9		
Female	160	55.7	16	29.1	13.131	<0.001*
Marital status						
Single	278	96.9	55	100.0		
Married	9	3.1	0	0.0	1.771	0.183
Previous semester estimate						
Weak	2	0.7		1.8		
Accepted	30	10.5		18.2		
Good	27	9.4		12.7		
Very good	116	40.4		45.5		
Excellent	112	39.0		21.8	7.583	0.108
Academic year						
First	96	33.4		32.7		
Second	191	66.6		67.3	0.011	0.917
Residence						
Rural	248	86.4		92.7		
Urban	39	13.6		7.3	1.675	0.196
Do you have a computer in home						
No	50	17.4	3	5.5		
Yes	237	82.6	52	94.5	5.047	0.025*
Are you a subscriber to the Internet						
No	6	2.1	1	1.8		
Yes	281	97.9	54	98.2	0.017	0.896
How many hours do you use the internet						
>2 hours	160	55.7	30	54.5		
1 – 2 hours	69	24.0	4	7.3		
<1 hour a day	10	3.5	0	0.0		
Others	48	16.7	21	38.2	18.542	<0.001*

- **(P< 0.05)= Significant.**
- **(P< 0.01)= Highly significant.**

Table (3) demonstrates that there is no statistically significant association between internet addiction and some of the socio-demographic characteristics of the sample (age, marital status, academic year and residence).

A highly statistically significant association between internet addiction and both sex and daily hours spent on the internet was detected. Additionally, a statistically significant association between Internet addiction and owing computer at home was revealed.

No statistically significant association was found between internet addiction and two of the sample characteristics (previous academic achievement and subscription to the internet).

Table 4. Total scoring of quality of life (QOL) domains.

	Mean ±SD	N	<50%		>50%
			%	N	%
Physical health	3.4 ±0.8	31	9.1	311	90.9
Psychological health	3.3 ±0.6	42	12.3	300	87.7
Social relationships	2.6 ±0.7	114	33.3	228	66.7
Environment	3.3 ±0.6	26	7.6	316	92.4
Total score	53.5 ±12.0	123	36.0	219	64.0

- **<50%**= low quality of life.
- **≥50%**= high quality of life.

According to Table (4), (90.9 %) of the students scored ≥50% on physical health domain (87.7%) of students' scored ≥50% in psychological health domain. According to students' social relation (66.7 %) were ≥50% compared to (33.3%) who were <50%. Concerning students' environment (92.4%) of students with high quality of life while (7.6%) of students with low quality of life. The total score reveal that (64.0%) of participants had high quality of life.

Table 5. The association between the quality of life and the socio-demographic& clinical characteristics of the students.

	QOL <50% (n=123)		QOL <50% (n=123)		Chi square	
	N	%	N	%	χ^2	P
Age (years)						
17-19	67	54.5	101	46.1		
>19	56	45.5	118	53.9	2.199	0.138
Sex						
Male	62	50.4	104	47.5		
Female	61	49.6	115	52.5	0.268	0.604
Marital status						
Single	121	98.4	212	96.8		
Married	2	1.6	7	3.2	0.758	0.384
Previous semester estimate						
Weak	2	1.6	1	0.5		
Accepted	20	16.3	20	9.1		
Good	12	9.8	22	10.0		
Very Good	53	43.1	88	40.2		
Excellent	36	29.3	88	40.2	7.405	0.116
Academic year						
First	42	34.1	72	32.9		
Second	81	65.9	147	67.1	0.057	0.811
Residence						
Rural	106	86.2	193	88.1		
Urban	17	13.8	26	11.9	0.272	0.602
Do you have a computer in home						
No	21	17.1	32	14.6		
Yes	102	82.9	187	85.4	0.364	0.546
Are you a subscriber to the Internet						
No	2	1.6	5	2.3		
Yes	121	98.4	214	97.7	0.170	0.680
How many hours do you use the internet						
>2 hours	67	54.5	123	56.2		
1-2 hours	26	21.1	47	21.5		
<1 hour a day	2	1.6	8	3.7		
Others	28	22.8	41	18.7	1.789	0.617

- **(P< 0.05)= Significant.**

Table 5 represents no statistical significance between quality of life and all variables of the socio-demographic and clinical characteristics of the students.

Table 6. Correlations among IA, social skills, quality of life

	R	P
Correlation of IA with quality of life	-0.436*	<0.001*

- **(P< 0.05)= Significant**
- **(P< 0.01)= Highly significant**
- **r= correlation co-efficient value**

Table 6 reveals reveals highly statistical significance strong negative correlation between internet addiction with quality of life (r=-0.43, P <0.001).

DISCUSSION

Internet addiction (IA) is considered a public health problem around the world particularly among adolescents. It negatively affect physical, psychological and social functions (Tang et al., 2014). Internet addiction is defined as an inability to control one's use of the internet that leads to negative consequences in daily life. The terms 'compulsive internet use', 'pathological internet use', 'problematic internet use', etc., were usually considered as the synonyms of IA, although their meanings may be different (American Psychiatric Association, 2013).WHO constructed the domains of quality of life in different area of life according to individual's perception in life; physical, psychological wellbeing, social relation and environment through assessment of individual's daily life. Current study was undertaken to assess internet addiction and quality of life among students of technical institute of nursing (El-Sabagh, & Shaban, 2018).

According to findings of this study, results revealed that the prevalence of internet addiction among technical institute of nursing students, Mansoura University, Egypt is (16%). This finding is slightly similar to the study that was conducted at Menofia University, Egypt which reported that the prevalence of internet addiction among students was (13.2%) (Desouky & Ibrahem, 2015) .

Additionally, the percentage of internet addiction reported in the current study is consistent with the study done by Wu et al., (2016), who found that 10.4% among Chinese adolescents was classified as addicted to the internet.

On the other hand, the prevalence of internet addiction among adolescents was higher in Ansari et al., (2017) that was 45.8% among adolescents in the Northwest of Iran.

While the prevalence of internet addiction was 2.7% among Egyptian and Malaysian medical students Tanta University, Egypt. The study conducted by Saied, Elsabagh, & El-afandy, (2016). Kuss, Griffiths, & Binder, (2013), revealed that 3.2% of the students from a British university in the East Midlands were considered addicted to internet.

In a representative sample from two large state universities; the University of Wisconsin and the University of Washington Institutional Review Boards., the prevalence of internet addiction was 4% (Christakis, et.al., & Zhou, 2011).

The possible explanation behind the differences in the percentage of IA in the current study and other studies may be related to differences in sample size and methodological variation e.g. variation in inclusion criteria.

Regarding the association between internet addiction and socio demographics characteristics, findings of this study revealed significant association between IA and gender where more than three quarter of participants were males, this is consistent with findings of Shi, Wang, & Zou, (2017), that was conducted on Chinese adolescents which reported higher prevalence of IA among males compared to females. However, Albiar et al., (2012), who recruited Spanish adolescents' sample, indicated that gender is not significantly associated with addictive use of the Internet.

The association between gender and IA reported in the current study could be explained by the following factors; firstly, in the Egyptian culture, there is more societal and cultural constraints imposed on female internet use compared to male. Large sector of families prohibit their daughters from excessive internet use in addition to stigmatizing female's self-disclosure on social media use in terms of posting their personal profile pictures on the internet. Secondly, females in the Egyptian cultural context are required to help in performing the daily household duties e.g. cleaning and ironing. Thirdly, most of the participants in the current study reside in rural areas where internet coverage and signal is quite poor compared to urban residence where females are restricted to go to internet café compared to males who have less family and societal restrictions to spend more time outside home compared to females.

A significant association between IA and owning computers at home was detected in the current study**.** This result is in line with Betül & Alkaya, (2017) who reported that most of children who have computer at home and have access to the internet at risk for internet addiction. The risk of IA increases with owning computers at home as home internet or Wireless Fidelity (Wi-Fi) use is more affordable and convenient compared to data or 3G internet usage.

A statistically significant association between internet addiction and time per day using internet was revealed. This result is matched with results reported by Tonioni et al., (2012) who investigated psychopathological symptoms, behaviors and hours spent online in patients with internet addiction disorder (IAD).

However, a study conducted by Kuss, et.al., & Mheen, Van De. (2013) that investigated the risk of Internet addiction in a large sample of Dutch adolescents through looking at the interplay between personality traits and the usage of different internet applications discovered that secondary school students spent comparatively higher daily average of 4.79 hours online than that reported in the current study.

A possible explanation behind the statistical significance revealed between internet addiction and time spent every day using the internet may be related to excessive internet use is used to escape from real life pressure or escaping from parents' conflict. Additionally, surfing porn and sport websites may increase the daily internet usage.

The current study revealed that nearly two thirds of participants had high quality of life which is consistent with Helseth & Misvær, (2010), who reported good quality of life among adolescents. Moreover, Yildirim et al., (2013), whose research aimed to evaluate the relationship between life satisfaction and quality of life among nursing students, reported that almost half of the students had good quality of life.

However, findings of the current study regarding quality of life is inconsistent with the study conducted on health-related quality of Life among Sweden university students during their education by Vaez, Voss, & Laflamme, (2010), who reported low quality of life especially among students in their final academic year. Additionally, according to the study done by Helseth & Misvær, (2010), on adolescents' perceptions of quality of life and revealed that sample of this study had low quality of life.

As quality of life depends on individual's perception and their point of view about their self-esteem and self-image, the reported high quality of life in the current study could be related to some factors e.g. most of the recruited students work in private hospitals as part time nursing aids and are partially independent financially which in turn increases their self-esteem and self-efficacy. Additionally, as the recruited sample is adolescents and most of them are of good physical health, this could explain the high quality of life reported in the current study.

Regarding the correlation between IA and quality of life, the current study demonstrated highly statistically significant strong negative correlation between them**.** This results is consistent with Shahnaz & Karim,(2014), which implied that Internet addiction had significant negative impacts on both quality of life and life engagement.

Additionally, Pontes, Szabo, & Griffiths,(2015), reported that IA worsens quality of life.

Possible explanations behind the significant negative correlation between IA and quality of life may be attributed to the following; firstly, excessive internet usage negatively influence the physical health status domain of the quality of life, individuals may neglect their activity of daily living due to their excessive preoccupation with internet use. Their energy level may be depleted due to decreased physical mobility and staying late at night; their vision and sleep are negatively affected as well. Secondly, regarding the influence of excessive internet use on the psychological domain of quality of life, students may demonstrate poor attention and concentration as a consequence of excessive internet use. This will consequently affect their academic achievement. Thirdly, regarding the influence of internet use on the social relationship domain of quality of life, students may be preoccupied with internet to the extent that they do not engage in real life social interactions. Finally, the environmental domain of quality of life may be influenced negatively by excessive internet use as students may financially spend a lot of money to cover the expenses of using the internet. Their security and safety may be affected by inappropriate usage of social media e.g. internet bullying, online blackmail and cybercrime.

CONCLUSION

The main conclusion drawn according to the current research is the threat of internet addiction seems to affect students' quality of life

RECOMMENDATIONS

The following recommendations are based on the finding drawn from this study:-

- Students should be screened by using scales such as Internet Addiction Scale to investigate the problem.
- Educational programs should be directed toward college students about the harms of excessive internet use.
- Planning prevention programs targeting high risk population.
- A large scale further research should be conducted on large sample to investigate internet addiction among university students.
- Future research should examine risk factors of IA disorder and use evidence based practice in prevention programs.
- Future research should investigate different online behavior (sexual chatting, pornography, gaming, and online shopping).

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