

Prevalence of Internet Addiction and its Consequences among Zagazig University Students, Egypt.

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ABSTRACT

Increasingly usage of computer technology and widespread Internet dominance has faced many people, particularly university students, and its extreme usage results in mental and psychological disorders. College students are believed to be at high risk with a marked increase in their internet usage worldwide. Therefore, this study aimed to identify the prevalence of internet addiction among university students and determine its impact on life quality. A cross-sectional study was conducted among a multistage sample of 300 Zagazig university students. A self-administered Arabic semi-structured questionnaire was used to collect data between September and November 2019. A total of 235 university students had internet addiction versus 65 students with average internet use. Severe internet addition was only detected among 2.3% of university students. Decreased family time was significantly higher among students with abnormal internet use than those with regular use (51.9% versus 20%, respectively). Worse social life was mainly related to internet addiction than normal users (37% versus 13.8%). Parent conflicts increased with spending a lot of time on the internet and decreased significantly when students turned towards regular use (11.1% versus 0% respectively). There were statistically significant relations between abnormal internet use and some physical and psychopathological problems. Internet addiction is a prevalent problem among university students. It harmed university students' health's social, physical, and mental aspects.



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1. INTRODUCTION

The internet is a global linking of computers that allows information transfer. The internet was established in the early 1960s by the US Department of Defense, primarily for military purposes [1]. Since then, the continual improvement of Internet technology has provided an extraordinary level of public accessibility to a wide range of forms of communication, e.g., data storage, management, and transfer; social websites like Facebook; text messaging such as Twitter, and so forth. The total number of worldwide internet users was estimated at 1.2 billion in 2000 and jumped to be 3.17 billion in 2015; Internet addiction prevalence rates among adolescents tend to be the highest, ranging from 0.8% to 26.7% in different countries [2]. According to the internet usage statistics, internet users are increasing in Egypt, reaching about 54.6 % of the population

in 2015, compared to 35.6% in 2012 [3]. There is not a general agreement on the definition of internet addiction. Research indicates that addiction is associated with specific online activities, which means particular patterns of maladaptive behaviors [4] characterize each addiction.

Internet addiction (IA) is a new term invented by psychiatrists as its addiction will damage the sleeping habits, health, and interest in studies and interaction abilities of real life. It is a behavioral pattern that, although problematic, serves to compensate for other negative aspects of life, perhaps by reducing adverse effects. Based on that theory, frustration from family, school life, social relationships, and other difficulties encountered in real life may contribute to internet addiction because the internet provides an escape from negative affect [5]. More and more people, especially adolescents, were affected by internet addiction because the internet offers more and more applications and options for engagement. In addition, social networking sites have gained substantial popularity and have become a dominant daily social practice, which might accelerate internet use to a great extent [6]. Also, IA is associated with psychosocial problems, including poor academic performance, poor parental-child relationships, physical and mental health problems, withdrawal from daily life, hostility, and aggressiveness [7]. The attention of researchers has focused on the treatment of internet addiction rather than on prevention. This study aimed to identify the prevalence of internet addiction among university students and determine its impact on life quality.

2. Methods

This study was conducted at two randomly selected faculties at Zagazig University from September till November 2019. The total number of students in all practical and theoretical faculties at Zagazig University recorded at the General Administration for Education Affairs in the academic year 2020/2021 is 117402 students. The estimated prevalence rate of internet addiction among university students is 26.7%⁸, so the sample size is calculated by the OpenEpi program to be 300 students with a confidence level of 95%. A multistage sampling method was used to conduct the study by dividing Zagazig University into practical and theoretical faculties', then by random selection, two faculties were chosen (the practical one was "Faculty of Medicine" and the theoretical one was "Faculty of Commerce"). Each faculty was divided into grades, and then each grade was also divided into sections. In the Faculty of Commerce, taking a section from each grade as a cluster sample was done. In the Faculty of Medicine, a random selection of individual medical students was taken from each section in each grade. The proportional allocation was considered while choosing the number of students included in our study from each faculty. As each grade in the faculty of Commerce had nearly 4000 students and each grade in the faculty of Medicine included about 1000 students, one medical student was chosen for every 4 Commerce students (so, 225 Commerce students versus 75 Medical students enrolled in the study).

2.1 Tools

A self-administered Arabic semi-structured questionnaire was used as a data collection tool, and it was divided into four sections;

2.1.1 Section I: demographic data and questions about internet use

- Socio-demographic data was assessed using Sawsan-Fahmy questionnaire [10] to evaluate social class level (age, sex, residence, mother's and father's education, mother's and father's work, family income, sewage, and refusal disposal, computer use, family income, and family size).
- The student data (faculty, grade, and last Grade Point Average GPA) were collected.
- Patterns of internet use (number of years using internet, number of days in which the internet is used per week, predominant time for internet use in the day, daily hours spent on the internet, the purpose of internet use, most familiar used device (s), internet speed and internet costs).

- Social effects of internet use (impact of the internet on social life and impact on the time that one used to spend with friends and family) were assessed.
- Physical adverse effects of using the internet (backache, shoulder pain, wrist and hands pain, headache, blurring of vision, sleep disturbances, and decreased physical activity) were assessed.

2.1.2 Section II young internet addiction test (IAT)

A test developed by Kimberly Young included 20 items, each rated on a six-point Likert scale from 0 to 5 (does not apply, rarely, occasionally, often, and consistently) [11]. The IAT total score was calculated by summing the student's ratings for the 20 item responses. The minimum score is 20 points, and the maximum score is 100 points. The IAT total score ranges, with the higher the score representing the severity of Internet compulsivity and addiction. A total score was interpreted according to the calculated score as follow: Scores of 0 to 30 points are considered to reflect an average level of Internet usage; Scores of 31 to 49 indicate the presence of a mild level of Internet addiction; Scores of 50 to 79 reflect the reality of a moderate level; Scores of 80 to 100 indicate a severe dependence upon the internet.

2.1.3 Section III Symptom Checklist-90 (SCL-90)

A structured self-report checklist was used to assess some psychological symptoms and psychological distress [12] and to detect its relation to the degree of internet addiction. The Arabic version SCL-90 consists of 90 items in total, which are divided into nine symptom dimensions: Somatization (12 items), Obsessive-compulsive (10 items), Interpersonal sensitivity (9 items), depression (13 items), anxiety (10 items), hostility (6 items), Phobic Anxiety (7 items), Paranoid ideation (6 items), Psychoticism (10 items) and additional items (7 items). To describe their feelings during the past month, the study subjects were asked to select from a 5-point Likert scale from 0 to 4 (never, rarely, occasionally, frequently, and consistently). Raw scores were calculated by dividing the sum of scores for a domain by the total number of items. Internal consistency for all dimensions of the SCL-90 was assessed. The Cronbach's Alpha ranged between (0.71 - 0.89). Cronbach's Alpha of the first domain (Somatization) was 0.897, that of the second domain (Obsessive-compulsive symptoms) was 0.773, that of the third domain (Interpersonal sensitivity) was 0.796, that of the fourth domain (Depression) was 0.856, that of the fifth domain (Anxiety) was 0.833, that of the sixth domain (Hostility) was 0.718, that of the seventh domain (Phobic anxiety) was 0.735, that of the eighth domain (Paranoid ideation) was 0.719, and that of the ninth domain (Psychoticism) was 0.802.

2.1.4 From the previous section, three global indices of distress were assessed

- The first is the General Severity Index (GSI), representing the present psychiatric disturbance's extent or depth. It is considered the most sensitive single quantitative indicator concerning the respondent's psychological distress status. It is computed by summing the nine dimensions and additional items' scores, then dividing by the total number of responses [13].
- The second one is the Positive Symptom Total (PST), which reveals the number of symptoms the respondent has endorsed to any degree and conveys the breadth or array of symptoms an individual is currently experiencing. It is calculated by counting the total number of questions rated above one point [14].
- Lastly, the Positive Symptom Distress Index (PSDI) is the third one, representing the symptoms' intensity and is calculated by dividing the sum of all items' values by the PST [14].

A pilot study was conducted before starting the field study on 30 students to test the data collection tool and modify it if needed and for detecting barriers in the work field. A simple modification was added to the questionnaire.

2.2 Administrative approval

Official permission from the Dean of both Faculty of Medicine and Faculty of Commerce, Zagazig

University, was taken to accomplish the study. The title and objectives of this study were explained to students to ensure their cooperation.

2.3 Ethical approval

Approval of the Institutional Review Board (IRB) of Zagazig University, Faculty of Medicine was taken after revision of study protocol. The study group was informed about nature, the study's purpose, and informed consent before filling out the questionnaire. Participants' data is confidential.

2.4 Statistical analysis

Was done using SPSS software version 27 [15]. Kolmogorov-Smirnov and Levene tests were used to determine the distribution characteristics of variables and variance homogeneity. Pearson's chi-square, fisher's exact, and chi-square for linear trend were used to analyze qualitative variables as appropriate. Student's t-test and Mann Whitney U test were used to analyze quantitative variables as appropriate. Logistic regression analysis was performed. A P-value of <0.05 was accepted as statistically significant.

3. Results

A total of 235 university students had internet addiction versus 65 students with regular internet use. Figure 1 shows that 39.7% of university students experienced mild internet addiction, 36.3% had moderate internet addiction, and 21.7% were normal users. Severe internet addition was only detected among 2.3% of university students. Table 1 shows that the study participants' mean age was 20 years old. More than half of them were females (57.3%). Regarding residence, 50.7% of the students lived in rural areas, while 49.3% lived in the city. More than three-quarters of the students live with their families (87%). Almost half of the students showed a middle social class (50.3%), 48.3% were of high social level, and only 1.3% were of low rank. There were non-significant differences between both groups (normal and abnormal users of the internet) and all the study participants' socio-demographic characteristics.

Table 2 shows that the mean years of using the internet were six years, and the mean days of using the internet were six days (almost all days of the week). More than three-fourths of the students were found to use the internet late at night (88.7%), while only 2.3% of them mostly used the internet in the morning. As regarding daily hours spent on the internet, it was found that 40.3% of the studied participants spent between one to three hours per day, and 39.7% of them spent 4 to 6 hours daily. Facebook and other social media applications were the most everyday purpose for using the internet, followed by education, file downloading and listening to music (90.3%, 72.3%, 44%, and 41%, respectively). However, internet gaming was used by 20.3% only of university students. Mobile phones were the most used devices to access the internet (96.7%), followed by laptops (32.7%). Regarding internet speed, 63% of the students mentioned that it was moderate speed, and 31% said it was high speed. More than two-thirds (72.3%) of the students said that the internet is of reasonable fees, and 18.7% said it is expensive.

There was a non-significant relation between abnormal internet use and mean years of using the internet. However, there were highly statistically significant relations between internet use days, predominant time of internet use, hours spent on the internet, and abnormal use. It was found that internet addiction was detected among those using the internet the whole day of the week compared to regular users who use the internet for five days only per week. As regarding hours spent per day on the internet, it was found that those with abnormal internet use used to spend between 4 and 6 hours daily browsing the internet (42.6% compared to 29.2% only among those with regular use), also, using the internet for 10 hours and more was detected only among students with internet addiction. About 92.3% of abnormal users were found to browse the internet late at night than 75.4% of the average users.

There were significant relations between internet use and education personal computer use. However, the relationship between abnormal use and all other items was non-significant. Internet use for education purposes was shared among normal users (90.8%) than those with abnormal use (67.2%).

Table 3 shows that 45% of the students experienced a marked decrease in time spent with their family and friends due to using the internet. Near half (42%) mentioned that the internet had a moderate effect on their social relations, and 32% said their social life was getting worse because of its use. Regarding parent conflicts, it was found that 42.3% of the students had some disagreements with their parents because of the long time spent on the internet, and 8.7% of them experienced these conflicts all the time they used the internet. More than half of the studied participants (58%) experienced fatigue. Sleep disturbance was the most common complaint (46%), followed by headaches, eye problems, backache, and decreased physical activity (44.3%, 37%, 24.7%, and 21.7%, respectively). Shoulder pain was the least detected symptom among them (16.3%). Decreased family time was significantly higher among students with abnormal internet use than those with regular use (51.9% versus 20%, respectively). Also, worse social life was significantly related to internet addiction than normal users (37% versus 13.8%). Regarding parents' conflicts with their siblings, it was found that the disputes increased with spending a lot of time on the internet and decreased significantly when the student's use turned towards regular use (11.1% versus 0% respectively).

There were statistically significant relations between the abnormal internet use and physical problems such as backache, shoulder pain, eye, and sleep issues, which were all found to increase among the odd users compared to those with regular internet use (28.9%, 19.1%, 40.4%, 52.3% versus 9.2%, 6.2%, 24.6%, and 23.1% respectively). All other physical problems also increased internet use, but their relation to addiction was non-significant. A highly statistically significant difference between the studied groups regarding all psychopathological symptoms: all symptoms (somatization, obsessive-compulsive disorders, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, and other additional items) and indices (GSI, PST, and PSDI) were found to be significantly higher among students who were recorded to have internet addiction when compared to those with regular use as shown in Table (4).

The increased number of hours spent on the internet (more than 5 hours) was a significant predictor of addiction development. However, using the internet for educational purposes and using PC rather than any other gadgets like mobiles were protective factors against the development of internet addiction, as shown in Table (5).

4. Discussion

The purpose of this research was to study the prevalence rate of internet addiction, how the students use the internet, the risk factors for internet addiction, the relationship between internet addiction, and psychological symptoms among undergraduate university students in Egypt. The study found that mild and moderate internet addictions were 39.7% and 36.3%, respectively. Surveys conducted among university students in Tunisia with mild and moderate internet addictions were 37.8% and 50.6%, respectively [16]. Problematic internet use (mild and moderate internet addiction) was detected among 76%, which was found to be higher when compared to studies conducted on adolescents aged between 12 and 18 years in the Philippines, which found that Problematic Internet Use was prevalent by (46%) and in Malaysian students (35.1%) [17]. This difference may be attributed to the different age groups being sampled. Adolescents primarily live with their parents relative to young adults, thereby having more parental guidance that has been shown to show an inverse association with internet addiction.

Severe internet addiction was detected among 2.3% of the studied students. A higher result (13.2%) was reported in a study carried out in Menofia University, Egypt [18], and in other studies in Malaysia [19] and Turkey [20], severe addiction was found to be (7.8% and 9.7%, respectively). Middle Eastern prevalence of PIU varies between 1 and 12% [21]. Variation in frequencies can be explained by the different tools and criteria used to identify problematic Internet use and addiction. Daily use of the internet was reported by 40.3% of university students for a duration of 1- 3 hours, which is in line with [22] who reported daily use in 64% of medical students in his study, and that about 40% used it around 1-2 hours. The late evening times were the most frequent times for internet use in the studied groups (88.7%), consistent with another study conducted in Egypt [23], which stated that 79.1% of students used the internet simultaneously (late night). This study showed that most students (96.7%) had home internet access, primarily through their mobile phones, similarly reported by [24] among a group of Egyptian adolescents. These gadgets, such as smartphones and tablets, may have propagated Internet use among youth. In the current study, 72.3% of university students showed that they use the internet for educational purposes, similar to [25], who reported that 72.6% of students in his study use the internet as a source of education. According to the use of social media, most study participants (90.3%) reported using Facebook; this finding corresponds to that of [26]. It was recorded to be used by 20.3% of the studied students regarding internet gaming, which was nearly similar to a study among Malaysian students (19.3%) [19].

By studying the negative impacts of internet use for a long time, 45% of students said that the time spent with families and friends markedly decreased while using the internet, and 70.7% experienced moderate to an extremely harmful effect on social relations. Which was found to be similar in results conducted by [26], who stated that widespread use of the internet among adolescents makes them feel alone, cut themselves off from their family, friends, and social activities and choose to spend most of their time alone. So, it leads to a low-income family and friends' relationship. In the present study, the most frequently reported adverse effects of internet use were headache, eye irritation, and sleep disturbances (44.3%, 37%, and 46%, respectively); these results were similarly found by another study conducted by [22]. Female students showed a higher percentage of problematic internet use (PIU) than males. However, the differences were not statistically significant. Contrary to [18], the prevalence of internet addiction was higher among male students. However, [27] stated that Internet addiction's prevalence did not vary with gender. Different frequencies may be due to differing numbers of items of the used questionnaire, differing response sets to questions and differing "cut off" points to distinguish addictive behavior from normal behavior. The present study showed that recent grades are more vulnerable to internet addiction.

No significant relationship was found between academic performance and internet addiction. Students with excellent degrees were found to show some degree of dependence, which may be due to using the internet for educational purposes. The same results were detected by [28], who found that most students at Taibah University, Madinah, think that using the internet provides them enough opportunities to promote themselves and their activities minority who don't think so. This result was inconsistent with [29], which found that students with poor academic performance had a higher level of internet addiction. Students with poor academic performance may experience stressors from schools and low self-esteem. Therefore, the internet can escape from these stressors and obtain satisfaction and pleasure through fulfilling its potential. Living with the family was associated non-significantly with addictive internet use (87.2%); this could be related to the internet's availability in almost all homes. However, living with friends was associated with average internet use (9.2%), contrary to another study that showed that the friend's home was the favorite place among students experiencing internet addiction because of more accessible access to the Internet websites. The present study findings regarding the relationship between addiction and residential status were consistent with another study conducted by [16] among Tunisian university students who found the same results regarding

living with their families their friends. Regarding using the internet for different purposes, our study showed that not using the internet for coursework and education purposes is associated significantly with addiction; however, average internet users were found to use it for education purposes. This was similar to another study conducted by [30].

The frequency of using the internet for other purposes like social networking and gaming was higher among addicted students than their non-addict counterparts. The same results were detected in a study delivered by [31]. This result indicates that the internet was used by students to strengthen peer relationships and to demonstrate that chatting was the fundamental explanation for internet addiction. The internet facilitates students' socialization and relationships because it helps them connect in an atmosphere that preserves their privacy, increasing the length of internet usage and internet addiction.

Using the internet for scientific research and education seems to protect against internet addiction. Internet addiction was found to be inversely associated with using the internet for scientific research; this finding is supported by the results of [32] while [33], [34] found no significant association between internet addiction and the use of the internet for academic research purpose.

The study documented that students' age at their first-time Internet use was not a risk factor for internet addiction. This finding was consistent with [35]. However, (Ahmadi K. 2014) demonstrated that IA was associated significantly with age at Internet usage. The present study revealed that the students of addictive nature to the internet spent 4 to 6 hours on the internet daily. Internet addicts are at higher risk of having poor sleep and defect in time management. A study conducted by [36] found that internet addicts find difficulty studying and suffering from time management and sleep problems. Sleep pattern is typically disrupted due to late-night log-ins. Such sleep deprivation causes excessive fatigue, making academic or occupational functioning impaired and decreasing one's immune system, making addicts vulnerable to disease. Internet addicts are at higher risk of reduced family time than their counterparts with average internet use, similar to a study conducted by [37] who found that internet addicts had lousy family relations.

Our study revealed a significant relationship between internet addiction and social isolation due to excessive internet use regarding social relationships. However, other studies have shown that people had enhanced social relationships online [38]. The level of parents' control over the internet at home is found more with non-addicts than addicts. The parent's conflicts were found to increase with improper use of the internet as their siblings gradually spend less time with real people in their lives for their increasing time in front of the computer.

Students with some internet addiction levels had higher scores for Anxiety and Depression compared to those with average use of the internet (14 versus 6 and 22 versus 11, respectively). Some students may experience some developmental changes leading them to experience social and psychological problems. Therefore, the internet is considered a rich environment to fulfill their needs and forget their problems. This study supports early studies' findings [39], indicating a relationship between Anxiety, Depression, and IA. The present study found that university students with IA demonstrated higher scores on all SCL-90 subscales than those without IA. Those with higher scores on interpersonal sensitivity have feelings of inadequacy, inferiority, significant discomfort in interactions, and self-doubt. Also, they have negative expectations about relationships. It is plausible that students with interpersonal sensitivity are drawn to electronic communication because of the anonymous cover granted to them, which helps them overcome real-life interpersonal difficulties. These results, however, do not indicate whether interpersonal sensitivity preceded the development of IA or if it was a consequence. Indeed, withdrawal from significant real-life relationships may be a consequence of IA.

The higher the internet use, the more the individual is prone to develop obsessive-compulsive symptoms. In a Turkish study, university students with IA had higher scores for somatization, Obsessive-Compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism than those without IA [40]. Regarding phobic anxiety and psychoticism, our study revealed a significant increase in their score among addicts compared to non-addicts (7, 13 versus 3 and 4 respectively). Showed similar results, who found significant differences between the means of psychiatric symptoms in all SCL-90-R subscales among addicts and non-addicts [41]. SCL-90 subscale averages increase significantly as the severity of the IA group increases.

Those who spent more than five hours a day accessing the internet were more commonly to have problematic or addictive Internet use compared to students who used the internet for an average of three hours or less a day (OR=2.48) which was in concordance with who mentioned that those who spent more than four hours a day on the internet were two times at risk to develop problematic and addictive Internet addiction compared to those who used internet for two hours or less a day (adjusted OR=2.36) [42].

Further analysis showed that internet use for scientific research and education seems to be a significant protective factor (adjusted OR=0.27) against internet addiction (Table 5). This finding is supported by Krishnamurthy S and Kumar S (2019), who found that potential PIU was inversely associated with utilizing the internet for educational purposes [43]. However, found no significant association between IA and the internet for academic research purposes [33].

5. Conclusion

The vast expansion of using intelligent devices continues to emerge, allowing the internet to use anytime and anywhere, making it impossible to prevent the internet from entering our lives. So, special attention should be paid to physical and psychological problems associated with inappropriate internet use regarding time and purposes of service.

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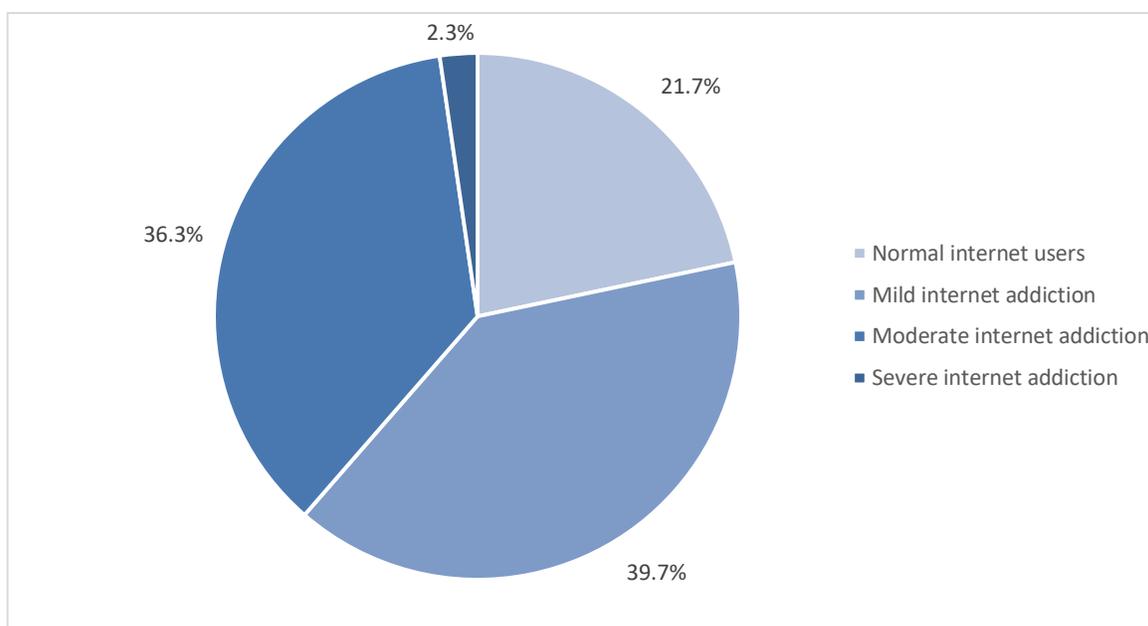


Figure (1): Prevalence of internet addiction among the studied group:

Table (1): Socio-demographic characteristics of the studied group:

Variable	Total (n=300)	Average internet users (n=65)	Addictive internet users (n=235)	p
Age:				
Mean \pm SD	19.9 \pm 1.6	19.9 \pm 1.3	20.1 \pm 1.3	0.7
	No (%)	No (%)	No (%)	
Sex:				
Female	172 (57.3)	37 (56.9)	135 (57.4)	0.9
Male	128 (42.7)	28 (43.1)	100 (42.6)	
Faculty:				
Medicine	75 (25.0)	16 (24.6)	59 (25.1)	0.9
Commerce	225 (75.0)	49 (75.4)	176 (74.9)	
Grades:				
Grade 1	75 (25.0)	19 (29.2)	56 (23.8)	0.6
Grade 2	78 (26.0)	14 (21.5)	64 (27.2)	
Grade 3	84 (28.0)	16 (24.6)	68 (28.9)	
Grade 4	63 (21.0)	16 (24.6)	47 (20)	
Last GPA:	(n=225)	(n=46)	(n=179)	
Excellent	57 (25.3)	9 (19.6)	48 (26.8)	0.7
Very good	75 (33.3)	16 (34.8)	59 (33.0)	
Good	78 (34.7)	17 (37.0)	61 (34.1)	
Poor	15 (6.7)	4 (8.7)	11 (6.1)	
Residence:				
Urban	148 (49.3)	32 (49.2)	116 (49.4)	0.9
Rural	152 (50.7)	33 (50.8)	119 (50.6)	
Living with:				
Family	261 (87.0)	56 (86.2)	205 (87.2)	0.3
Friends	21 (7.0)	6 (9.2)	15 (6.4)	
Father only	4 (1.3)	2 (3.1)	2 (0.9)	

Mother only	5 (1.7)	0 (0.0)	5 (2.1)	
Alone	9 (3.0)	1 (1.5)	8 (3.4)	
Social class:				0.5
Low class	4 (1.3)	0 (0.0)	4 (1.7)	
Moderate class	151 (50.3)	31 (47.7)	120 (51.1)	
High class	145 (48.3)	34 (52.3)	111 (47.2)	

Table (2): Patterns of internet use among the studied group:

Variable	Total (n=300)	Average internet users (n=65)	Addictive internet users (n=235)	p
Years of using internet:				
Mean ± SD.	6.2 ± 2.7	6.1 ± 2.9	6.2 ± 2.6	0.9
Days of using internet per week:				
Mean ± SD	6.0 ± 1.6	5.2 ± 1.9	6.3 ± 1.5	<0.001*
	No (%)	No (%)	No (%)	
Predominant time for internet use:				
Morning	7 (2.3)	2 (3.1)	5 (2.1)	<0.001*
Afternoon	27 (9.0)	14 (21.5)	13 (5.5)	
Late night	266 (88.7)	49 (75.4)	217 (92.3)	
Daily hours spent on Internet:				
1-3 hours	121 (40.3)	45 (69.2)	76 (32.3)	<0.001*
4-6 hours	119 (39.7)	19 (29.2)	100 (42.6)	
7-9 hours	43 (14.3)	1 (1.5)	42 (17.9)	
10-12 hours	14 (4.7)	0 (0.0)	14 (6.0)	
More than 12 hours	3 (1.0)	0 (0.0)	3 (1.3)	
Purpose of using:				
Facebook and social media	271 (90.3)	56 (86.2)	215 (91.5)	0.2
Education	217 (72.3)	59 (90.8)	158 (67.2)	<0.001*
File downloading	132 (44.0)	29 (44.6)	103 (43.8)	0.9
Music	123 (41.0)	27 (41.5)	96 (40.9)	0.9
Internet gaming	61 (20.3)	9 (13.8)	52 (22.1)	0.1
Finding new friends	41 (13.7)	12 (18.5)	31 (13.2)	0.3
Creating webpages	14 (4.7)	2 (3.1)	12 (5.1)	0.5
Internet access:				
Mobile phones	290 (96.7)	61 (93.8)	229 (97.4)	0.2
Laptops	98 (32.7)	23 (35.4)	75 (31.9)	0.6
Personal computer	41 (13.7)	15 (23.1)	26 (11.1)	0.01*
Tablet	16 (5.3)	1 (1.5)	15 (6.4)	0.1
Internet speed:				
High speed	93 (31.0)	20 (30.8)	73 (31.1)	0.2
Moderate speed	189 (63.0)	38 (58.5)	151 (64.3)	
Low speed	18 (6.0)	7 (10.8)	11 (4.7)	

Internet costs:				
High cost	56 (18.7)	8 (12.3)	48 (20.4)	0.1
Moderate cost	217 (72.3)	48 (73.8)	169 (71.9)	
Low cost	27 (9.0)	9 (13.8)	18 (7.7)	

Table (3): Social and physical consequences of internet use among the studied group:

Variable	Total (n=300)	Average internet users (n=65)	Addictive internet users (n=235)	p
	No (%)	No (%)	No (%)	
Effect on family and friend's times:				<0.001*
Markedly decreased	135 (45.0)	13 (20.0)	122 (51.9)	
No change	165 (55.0)	52 (80.0)	113 (48.1)	
Effect on social relations:				<0.001*
No change	88 (29.3)	31 (47.7)	57 (24.3)	
Moderate effect	126 (42.0)	26 (40.0)	100 (42.6)	
Extreme effect	86 (28.7)	8 (12.3)	78 (33.2)	
Effect on social life:				0.001*
No change	102 (34.0)	32 (49.2)	70 (29.8)	
Getting better	102 (34.0)	24 (36.9)	78 (33.2)	
Getting worse	96 (32.0)	9 (13.8)	87 (37.0)	
Parent's conflicts:				<0.001*
Always	26 (8.7)	0 (0.0)	26 (11.1)	
Sometimes	127 (42.3)	19 (29.2)	108 (46.0)	
Rarely	147 (49.0)	46 (70.8)	101 (43.0)	
Effect on physical energy:				0.09
No change	110 (36.7)	30 (46.2)	80 (34.0)	
Feeling of fatigue	174 (58.0)	30 (46.2)	144 (61.3)	
Feeling to have more energy	16 (5.3)	5 (7.7)	11 (4.7)	
Physical problems:				<0.001*
Sleep disturbances	138 (46.0)	15 (23.1)	123 (52.3)	
Headache	133 (44.3)	23 (35.4)	110 (46.8)	
Eye problems	111 (37.0)	16 (24.6)	95 (40.4)	
Backache	74 (24.7)	6 (9.2)	68 (28.9)	
Decreased physical activity	65 (21.7)	17 (26.2)	48 (20.4)	
Wrist and finger pain	56 (18.7)	8 (12.3)	48 (20.4)	
Shoulder pain	49 (16.3)	4 (6.2)	45 (19.1)	

Table (4): Psychopathology items among the studied groups:

Variable	Total (n=300)	Average internet users (n=65)	Addictive internet users (n=235)	p
	Median (Range)	Median (Range)	Median (Range)	
Somatic	14 (0 – 45)	9 (0 – 23)	18 (1 – 45)	<0.001*
Obsession	14 (0 – 34)	11 (0 – 20)	17 (2 – 34)	<0.001*
Sensitivity	12 (0 – 32)	10 (0 – 29)	15 (0 – 32)	<0.001*
Depression	16 (0 – 48)	11 (0 – 28)	22 (3 – 48)	<0.001*
Anxiety	10 (0 – 37)	6 (0 – 25)	14 (0 – 37)	<0.001*
Hostility	6 (0 – 20)	4 (0 – 14)	8 (0 – 20)	<0.001*

Phobic anxiety	5 (0 – 23)	3 (0 – 16)	7 (0 – 23)	< 0.001 *
Paranoid	7 (0 – 23)	5 (0 – 18)	9 (1 – 23)	< 0.001 *
Psychoticism	8 (0 – 36)	4 (0 – 22)	13 (1 – 36)	< 0.001 *
Additional items	11 (0 – 25)	9 (0 – 20)	14 (2 – 25)	< 0.001 *
GSI	0.28 (0.01 – 0.49)	0.18 (0.01 – 0.49)	0.38 (0.10 – 0.48)	< 0.001 *
PST	33 (1 – 88)	21 (1 – 53)	46 (4 – 88)	< 0.001 *
PSDI	3.34 (2 – 9.2)	3.18 (2.3 – 9.2)	3.50 (2 – 8.8)	0.02 *

Table (5): Logistic regression analysis of factors predicting internet addiction among studied group.

Independent factors	B	S.E.	Wald	O.R (95% C.I)	P-value
Days of using internet/week	0.114	0.092	1.550	1.12 (0.93 – 1.34)	0.213
Predominant time of use	0.250	0.346	1.833	1.28 (0.56 – 23.4)	0.470
Hours spent on internet	0.909	0.277	10.79	2.48 (1.44 – 4.26)	0.001
Use for education purpose	-1.28	0.486	8.437	0.27 (1.62 – 12.0)	0.008
Use of PC	-0.902	0.425	4.375	0.40 (1.06 – 5.96)	0.03